



Town of Nantucket

INVITATION FOR BIDS FOR RECONSTRUCTION OF THE BOULEVARDE

The Town of Nantucket DPW, through Town Administration invites qualified bidders to submit bids for the RECONSTRUCTION OF THE BOULEVARDE bid. The work under this contract will consist of:

Reconstruction of the road known as Boulevarde in the Town of Nantucket. The work includes but will not be limited to: Unclassified Excavation; Pavement Milling; Old Pavement Excavation; Gravel Borrow Placement; Grading and Compacting; Drainage Structure Adjusted; Frame and Grate; Frame and Cover; Cleaning Drainage Structures; Hot Mix Asphalt Base Course, Intermediate Course, Leveling Course and Surface Course; Hot Mix Asphalt Berm; Hot Mix Asphalt for Miscellaneous Work; Cobblestone Pavement Removed and Reset; Loam Borrow; Seeding; Road Signs and Supports; Traffic Cones and Safety Signing for Traffic Management; Temporary Markings (Painted); Portable Changeable Message Sign; Reflectorized Drum; and other incidental work.

I. GENERAL INFORMATION

- 1) Bids can be obtained from and will be accepted at the Town of Nantucket, Procurement Office, 16 Broad Street, 2nd floor Nantucket, MA 02554, until **3:00PM, Wednesday, June 15, 2016** and publicly opened forthwith for this invitation for bid. Two copies of the bid are required.

- 2) The bid envelope must be sealed and clearly marked:

Reconstruction of the Boulevarde

- 3) Award date. Award will be made within forty-five (45) days after bid opening unless otherwise stated in the specifications or the time for award is extended by mutual consent of all parties. All bids submitted shall be valid for a minimum period of forty-five (45) calendar days following the date established for acceptance.
- 4) If any changes are made to this IFB, an addendum will be issued. Addenda will be mailed or faxed to all bidders on record as having requested the IFB. Each responder shall acknowledge receipt of any and all addendum issues by submitting acknowledgment forms provided with any Addenda. **Failure to do so shall be cause to reject the submittal as being unresponsive.**
- 5) Questions concerning this IFB must be submitted in writing to: Heidi Bauer, Chief Procurement Officer, 16 Broad Street, Nantucket, MA 02554 **before Monday, June 13, 2016**. Questions may be delivered, mailed, faxed or emailed to hbauer@nantucket-ma.gov. Written responses will be mailed or faxed to all bidders on record as having requested the IFB in the form of addenda that must be acknowledged.
- 6) Bids may be modified, corrected or withdrawn only by written correspondence received by the Town of Nantucket prior to the time and date set for the bid opening. Bid modifications must be submitted in a sealed envelope clearly labeled "Modification No. ____" and must reference the original IFB.



Town of Nantucket

- 7) After the bid opening, a bidder may not change any provision of the bid in a manner prejudicial to the interests of the Town of Nantucket or fair competition. Minor informalities will be waived or the bidder will be allowed to correct them. If a mistake and the intended bid are clearly evident on the face of the bid document, the mistake will be corrected to reflect the intended bid, and the bidder will be notified in writing; the bidder may not withdraw the bid. A bidder may withdraw a bid if a mistake is clearly evident on the face of the bid, but the intended correct bid is not similarly evident.
- 8) The Town of Nantucket reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in its best interest.
- 9) The Town of Nantucket will not be responsible for any expenses incurred in preparing and submitting bids. All bids shall become the property of the Town of Nantucket.
- 10) Responders must be willing to enter into the Town of Nantucket's standard form of contract that will include the service description of this IFB.
- 11) Bidders must submit a bid deposit of five percent (5%) of the amount of the base bid. Bid deposit may be in the form of a certified check; a bank, treasurers or cashier's check; or a bid bond from a surety company.
- 12) The successful bidder must provide a one hundred percent (100%) payment bond and a one hundred percent (100%) performance bond from a surety company licensed in Massachusetts payable to the Town of Nantucket within ten (10) days of the notification of the contract award.
- 13) The bid, and any subsequent contract for the services, is hereby issued in accordance with applicable Massachusetts General Laws. The selected bidder shall be expected to comply with all applicable state and federal laws in performance of service.
- 14) Bids received prior to the date of opening will be securely kept, unopened. No responsibility will attach to an officer or person for the premature opening of a bid not properly addressed and identified.
- 15) Any bids received after the advertised date and time for opening will be returned to the responder unopened.
- 16) Purchases by the Town of Nantucket are exempt from federal, state and municipal sales and/or excise taxes.
- 17) Unexpected closures. If, at the time of the scheduled bid opening, Town Hall is closed due to uncontrolled events such as fire, snow, ice, wind or building evacuation, the bid opening will be postponed until **2PM** on the next normal business day. Bids will be accepted until that date and time.
- 18) The Town of Nantucket is an Affirmative Action/Equal Opportunity Employer. The Town encourages bids from qualified MBE/DBE/WBE firms.



Town of Nantucket

- 19) Bidders should be aware that many overnight mailing services do not guarantee service to Nantucket.

PREVAILING WAGE

- 20) Pursuant to Massachusetts General Laws, chapter 149, sections 26 and 27, the Division of Occupational Safety (formerly the Department of Labor and Industries) has determined the Prevailing Wage Rates for this work. The enclosed rates apply only to this work. The Prevailing Wage shall become part of the contract signed between the successful bidder and the awarding authority or the contract is invalid. Prevailing Wages must be paid to all persons employed on the public works project, regardless of whether they are employed by the successful bidder or a subcontractor. The wage rates issued for each project shall be paid for the entire project. Payroll records must be kept by the successful bidder for all persons employed on the project. A separate Statement of Compliance must be submitted to the Division of Occupational Safety by every employer, including all prime contractors and subcontractors, when its portion of the work is completed. The enclosed form entitled "Weekly Payroll Records Report and Statement of Compliance" clearly details these requirements. A certified payroll must be submitted to the Board of Selectmen office for each week work is performed for the Town under this contract.
- 21) **Contractor must comply with:** Chapter 306 of the Acts of 2004 § 1. (3) who shall certify that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and **SECTION 2** (3) that all employees to be employed in the work subject to this bid have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration. (b) Any employee found on a worksite subject to this section without documentation of successful completion of a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration shall be subject to immediate removal. **SECTION 5** This act shall take effect on July 1, 2006.
- 22) The contract issued as a result of this Invitation to Bid will be valid until June 30, 2017 with no stipulation for extensions.
- 23) Prior to work proceeding, a Notice to Proceed must be obtained from the Department of Public Works office, signed by the Town Engineer. This Notice to proceed will include: Type of project, name of street, length, width, approximate tonnage, start date, finish date. A copy of the Notice to Proceed is attached hereto.
- 24) Bidders must be currently prequalified by MassDOT, Highway Division in the specified class of work with a single contract limit greater than or equal to the project value. A contractor deemed to be prequalified will be eligible to take out official bid documents. Contractors seeking information only bid documents are not required to follow aforementioned procedures.



Town of Nantucket

25) Pre-Bid Conference

A pre-bid conference will be held at 2:00 PM on **Wednesday, June 8, 2016** at the Department of Public Works office located at 188 Madaket Road, Nantucket, MA.

II. BID SUBMISSION REQUIREMENTS

- 1) The Tax Compliance Certification must be included with the bid response. The bid must be signed by the authorized individual(s).
- 2) A Certificate of Non Collusion must be submitted with the bid response.
- 3) Bidders must submit a bid deposit of five percent (5%) of the amount of the base bid. Bid deposit may be in the form of a certified check; a bank, treasurers or cashier's check; or a bid bond from a surety company.
- 4) Bid Price Form
- 5) Reference list per Section V of this IFB.
- 6) Contractor must be on the official bidders list submitted to the Awarding Authority by MassDOT.
- 7) Acknowledgement of all addenda issued.
- 8) OSHA Training Certification

III. CONTRACT GENERAL CONDITIONS

1) CONTRACT DOCUMENTS

- A. The Contract Documents consist of the Agreement, the General Conditions, Supplementary and other Conditions, the Drawings, the Specifications, all Addenda issued prior to the execution of this Agreement, all amendments, Change Orders, and written interpretations of the Contract Documents issued by the Town Engineer. These form the Contract and what is required by any one shall be as binding as if required by all. The intention of the Contract Documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the Work and the terms and conditions of payment therefore, and also to include all Work which may be reasonably inferable from the Contract Documents as being necessary to produce the intended results.
- B. The Contract Documents shall be signed in not less than triplicate by the Owner and the Contractor. By executing the Contract, the Contractor represents that he has visited the site and familiarized himself with the local conditions under which the Work is to be performed.
- C. The term Work as used in the Contract Documents includes all labor necessary to produce the construction required by the Contract Documents, and all materials and equipment incorporated or to



Town of Nantucket

be incorporated in such construction.

2) ENGINEER

- A. The Town Engineer (hereinafter Engineer) will provide general administration of the Contract and will be the Owner's representative during the construction period.
- B. The Engineer shall at all times have access to the Work wherever it is in preparation and progress.
- C. The Engineer will make periodic visits to the site to become generally familiar with the progress and quality of the Work in accordance with the Contract Documents. On the basis of on-site observations by the Engineer, they will keep the Owner informed of the progress of the Work, and will endeavor to guard the Owner against defects and deficiencies in the Work of the Contractor. The Engineer will not be required to make exhaustive or continuous on-site inspections to check the quality or quantity of the Work. The Engineer will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and will not be responsible for the Contractor's failure to carry out the Work in accordance with Contract Documents.
- D. Based on such observations and the Contractor's Application for Payment, the Engineer will determine the amounts owed to the Contractor and will issue Certificates for Payment in accordance with Section 3 Sub-Section 9.
- E. The Engineer will be, in the first instance, the interpreter of the requirements of the Contract Documents. He/She will make decisions on all claims and disputes between the Owner and Contractor.
- F. The Engineer will have the authority to reject Work which does not conform to the Contract Documents.

3) OWNER

The Owner shall issue all instructions to the Contractor through the Engineer.

4) CONTRACTOR

- A. The Contractor shall supervise and direct the Work, using their best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences and procedures and for coordinating all portions of the Work under the Contract.
- B. Unless otherwise specifically noted, the Contractor shall provide and pay for all labor, materials, equipment, tools, construction equipment and machinery, water, heat, utilities, transportation, and other facilities and services necessary for the proper execution and completion of the Work.
- C. The Contractor warrants to the Owner that all materials and equipment incorporated in the work will be new unless otherwise specified, and that all work will be of good quality, free from faults and defects and in conformance with the Contract Documents. All work not so conforming to these standards may be considered defective.



Town of Nantucket

- D. The Contractor shall give all notices and comply with all laws, ordinances, rules, regulations, orders of any public authority bearing on the performance of Work, and shall notify the Engineer if the Drawings and Specifications are at variance therewith.
- E. The Contractor shall be responsible for the acts and omissions of all their employees and all Subcontractors, their agents and employees and all other persons performing any of the Work under a contract with the Contractor.
- F. The Contractor shall review, stamp with their approval and submit all samples and shop drawings as directed for approval of the Engineer for conformance with the design concept and with the information given in the Contract Documents. The Work shall be in accordance with approved samples and shop drawings.
- G. The Contractor shall at all times keep the premises free from the accumulation of waste materials or rubbish caused by their operations. At the completion of the Work they shall remove all their waste materials and rubbish from and about the Project as well as their tools, construction equipment, machinery and surplus materials and shall clean all glass surfaces and shall leave the Work "broom clean" or its equivalent, except as otherwise specified.

5) SUBCONTRACTS

- A. Subcontractor is a person who has a direct contract with the Contractor to perform any of the work at the site.
- B. Unless otherwise specified in the Contract Documents or in the Instructions to Bidders, the Contractor, as soon as practicable after the award of the Contract, shall furnish to the Engineer in writing, a list of the names of Subcontractors proposed for the principal portions of the Work. The Contractor shall not employ any Subcontractor to whom the Engineer or the Owner may have a reasonable objection.

Contracts between the Contractor and the Subcontractor shall be in accordance with the terms of this Agreement and shall include the General Conditions of this Agreement insofar as applicable.

6) CONTRACT DURATION

- A. All time limits stated in the Contract Documents are of the essence of the Contract.
- B. If the Contractor is delayed at any time in the progress of the Work by changes ordered in the Work, by labor disputes, fire, unusual delay in transportation, unavoidable casualties, causes beyond the Contractor's control, or by any cause which the Engineer may determine justified the delay, then the Contract duration shall be extended by Change Order for such reasonable time as the Engineer or Owner or both may determine.

7) PAYMENTS

A. Method of Payment to Contractor

- The Contractor shall make monthly estimates of the materials complete in place and the amount of



Town of Nantucket

work performed in accordance with the Contract.

- The estimates will be itemized on the sheets provided for review and approval by the Engineer and submitted prior to the twentieth of each month during the construction period. Each estimate will show the total value of the work done to date, the total money due the Contractor since the previous estimate and the money paid the Contractor to date. This estimate will be considered approximate only and shall be subject to correction on subsequent estimates.
- Five (5%) percent of all payments due the Contractor for work done and materials furnished will be withheld until final completion of the work under the provisions of G.L. Ch. 30, Section 39G.
- The acceptance by the Contractor of the final payment, including the retainage of five (5%) percent, shall operate as a release to the Town of all claims and all liabilities to the Contractor for all work done or materials furnished in connection with the Contract. Final payment shall be as provided in G.L. 30, Section 39G. The payment to the Contractor of said final payment does not, however, release them or their sureties from any obligation under this Contract.

B. Town's Right to Withhold Payments

- The Town may withhold from the Contractor so much of any approved payment due them as may in the judgment of the Engineer be necessary:
 - To assure payments of just claims then due and unpaid of any persons supplying labor or materials for the work;
 - To protect the Town from loss due to defective work not remedied; or,
 - To protect the Town from loss due to injury to persons or damage to the work or property of other contractors, subcontractors or others, caused by acts or neglect of the Contractor or their subcontractors.
- The Town shall have the right as agent for the Contractor to apply any such amounts so withheld in such manner as the Town may deem proper to satisfy such claims or to secure such protection.
- No payments shall be made to the Contractor by the Town until all payroll and workforce records for the period of the application have been submitted to the Town.

C. Measurement and Quantities

- It is estimated that the quantity of materials mentioned in the Proposal will be required, but this amount shall not control the performance of this Contract, and the Contractor shall be bound hereunder whether or not such estimate is even approximately correct.
- The Town reserves the right to limit the prosecution of the work to such points, and in such order as the Town may direct.
- The Town reserves the right to eliminate any portion of the work, so as to bring the total expenditure



Town of Nantucket

within the amount available for the project.

- The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the Contract shall be selected by the Engineer.

D. Final Payments

- Final payments shall not be due until the Contractor has delivered to the Owner a complete release of all liens arising out of this Contract or receipts in full covering all labor, materials and equipment for which a lien could be filed, or a bond satisfactory to the Owner indemnifying him against any lien.

The making of final payments shall constitute a waiver of all claims by the Owner except those arising from 1) unsettled liens, 2) faulty or defective Work appearing after Substantial Completion, 3) failure of the Work to comply with the requirements of the Contract Documents, or 4) terms of any special guarantee required by the Contract Documents. The acceptance of final payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and still unsettled.

8) PROTECTION OF PERSONS AND PROPERTY

The Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. They shall take all reasonable precautions for the safety of, and shall provide all reasonable protection to prevent damage, injury or loss to 1) all employees on the Work and other persons who may be affected thereby; 2) all the Work and all the materials and equipment to be incorporated therein; and 3) other property at the site or adjacent thereto. The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss.

All damage or loss to any property caused in whole or in part by the Contractor, any Subcontractor or anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable, shall be remedied by the Contractor, except damage or loss attributable to faulty Drawings or Specifications or to the acts or omissions of the Owner or Engineer or anyone employed by either of them or for whose acts either of them may be liable but which are not attributable to the fault or negligence of the Contractor.

9) INSURANCE REQUIREMENTS

Insurers shall be licensed and registered in accordance with Massachusetts General Laws. Policies shall indemnify against loss with no deductible amount. Policies shall not contain any provision for Contractor self-insurance.

The limits of the several kinds of liability insurance required for this Contract, in addition to insurance for Workmen's Compensation and Traffic police, are listed as follows:

Public Liability	\$1,000,000/\$2,000,000
Property Damage Liability	\$1,000,000/\$2,000,000
Protective Public Liability	\$1,000,000/\$2,000,000
Protective Property Damage Liability	\$1,000,000/\$2,000,000



Town of Nantucket

10) CHANGES IN THE WORK

- A. The Owner without invalidating the Contract may order Changes in the Work consisting of additions, deletions, or modifications, the Contract Sum and the Contract Time being adjusted accordingly.
- B. All such changes in the Work shall be authorized by written Change Order signed by the Owner as their duly authorized agent.
- C. The Contract Sum and the Contract Time may be changed only by written Change Order.
- D. The cost or credit to the Owner from a Change in the Work shall be determined by mutual agreement.

11) CORRECTION OF WORK

The Contractor shall correct any Work that fails to conform to the requirements of the Contract Documents where such failure to conform appears during the progress of the Work, and shall remedy any defects due to faulty materials, equipment or workmanship which appear within a period of one year from the Date of Substantial Completion of the Contract or within such longer period of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Document. The provisions of this Paragraph apply to Work done by subcontractors as well as to Work done by direct employees of the Contractor.

12) TRAFFIC CONTROL AND BARRICADES

- A. Contractor shall coordinate with the police and fire departments and shall initiate all measures to include erection of barricades, to insure the safety of vehicular and pedestrian traffic in the area adjacent to construction.
- B. No excavation shall be left open overnight.
- C. Contractor shall notify the Town 24 hours in advance of any pavement cut and shall at that time supply any estimate of the duration of work involving disruption of traffic.
- D. Any paving cuts left overnight shall be marked with an approved illuminated warning device.
- E. Refer to Standard Specification Section 850 for general policy and description of warning devices.

13) PRE-BID CONFERENCE

A pre-bid conference will be held **Wednesday, June 8, 2016 at 2pm** at the DPW office located at 188 Madaket Road, Nantucket, MA 02554.

14) ROAD OPENING/TRENCH PERMIT

The Contractor, if required, shall apply to the Town for a Road Opening/Trenching Permit at least 24 hours in advance of commencement of work in the Town right-of-way or on Town property. A form for this purpose can be obtained from the Department of Public Works Administration and Technical Support



Town of Nantucket

Division. The cost of the Permit is \$160.00.

15) NOTIFICATION OF UTILITIES

In accordance with Chapter 502 of the Acts of 1980, the Contractor shall notify the applicable utilities 72 hours, Saturdays, Sundays and holidays excluded prior to commencing work on the site. Evidence of this notification must be furnished to the Town in order to obtain the road opening permit of paragraph 14, Section III.

Before commencing work on service connections, the Contractor shall be responsible for contacting the Nantucket Electric Company (NECO) to obtain construction requirements, standards, and to give adequate notice of commencement of work. The Contractor's attention is further directed to the requirements of Work in the Immediate Vicinity of Certain Underground Structures and Utility Poles herein included in these Special Provisions.

The following are the names of owners of the principal utilities affected, but completeness of this list is not guaranteed by the Town.

MASSACHUSETTS STATE POLICE
83 North Liberty Street
Nantucket, MA 02554 (508) 228-0706

WANNACOMET WATER COMPANY
1 Milestone Road
Nantucket, MA 02554
Contact: Robert Gardner, Manager (508) 228-0022

NANTUCKET FIRE DEPARTMENT
16 Broad Street
Nantucket, MA 02554
Contact: Chief Mark McDougall (508) 228-2323

NANTUCKET POLICE DEPARTMENT
Nantucket, MA 02554
Contact: Chief William Pittman (508) 228-1212

VERIZON
44 Old Townhouse Road
South Yarmouth, MA 02664 (508) 398-5754

NANTUCKET ELECTRIC COMPANY
Bunker Road
Nantucket, MA 02554 (508) 325-8220



Town of Nantucket

COMCAST
1 Monomoy Road
Nantucket, MA 02554

(888) 633-4266

IV. QUALITY REQUIREMENT

Quality Requirements are yes or no standards that are applied to this bid and essential for the contract. If the contractor does not meet a quality requirement the bid will be rejected as non responsive and will be eliminated from further consideration.

- a) Bidder must provide all of the items described in Section III and comply with all of the bid submission requirements listed in Section II.
- b) Contractor must have been regularly and actively engaged in the asphalt paving business, operating under the same business name and business organization structure; and performing the type of work described above under "SCOPE OF WORK" for a minimum of five (5) years.
- c) Contractor must be prequalified by MassDOT and must be listed on the Official Contractor Bid List issued by MassDOT
- d) Contractor shall be registered as a business with the office of the secretary of commonwealth in the business category of roadway/highway resurfacing, paving or similar category directly related to the work required.
- e) The contractor shall have sufficient labor and equipment available to perform the work at the time of the bid opening. Additional qualifications and equipment requirements are included in the specifications

V. REFERENCES

Bidders must provide a complete list of all customers from whom it performed a similar service, costing over \$100,000 in the past five years. Reference information must include Company/Government Name, Contact Person, Phone Number, Fax Number and date of purchases.

Poor references may be a basis for determining that a bidder is not responsible. Reference questions will include but may not be limited to vehicle quality and durability, timely delivery, customer service and general customer satisfaction.

VI. RULE FOR AWARD

One contract will be awarded to the responsive and responsible MassDOT pre-qualified bidder the lowest GRAND TOTAL price for labor and materials combined for all items listed combined, considering the estimated number of ton, linear foot & square yard (**SUM OF ALL BID ITEM QUANTITY X UNIT BID PRICE**). The quantities listed on the Bid Sheet for all unit bid items is intended for the purpose of determining the low bid. It is an estimated number not a guarantee of the quantity for the item and is not meant to hold the town to a specific amount of work. Actual number of bid item quantities on the contract may be higher or lower than the number stated.

In the event of a tie the Town will conduct a "drawing of straws" to determine the award with the lowest straw being the winner. The Town reserves the right to reject any and all bids if it determines that it is in the best interest to do so.



Town of Nantucket

Subject to the requirements of chapter 29, section 8b of the general laws, each prospective bidder proposing to bid on any work to be awarded by a municipality under the provisions of section 34 of chapter 90 must be prequalified in accordance with 720 cmr 5.00, "prequalification of contractors".

Only a bidder who is prequalified by MassDOT highway division, in the specified class of work with a single contract limit greater than or equal to the project value shall be eligible for award of contract. All proposals submitted by non-prequalified bidders are subject to rejection by the municipality.

VII. BASIS OF COMPENSATION

This is a per unit contract respectively. There will be no reimbursable expenses. Any and all expenses related to the work will be included in the unit bid price for each bid item as described in the 1988 MassDOT Standard Specifications for Highways and Bridges and the Technical Specifications included in this bid.



Town of Nantucket

CERTIFICATE OF NON-COLLUSION

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals.

Signature of person signing bid or proposal

Please Print Name

Name of Business



Town of Nantucket

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. 62C, §49A, I certify under the penalties of perjury that, to the best of my knowledge and belief, I am in compliance with all laws of the Commonwealth relating to taxes, reporting of employees and contractors, and withholding and remitting child support.

Federal Employer ID Number

Name of Corporation

By: _____
President's Signature

Date: _____



Town of Nantucket

RECONSTRUCTION OF THE BOULEVARDE BID PRICE FORM

ITEM	QUANT.	UNIT	DESCRIPTION	Unit Price	Amount
101.	0.75	A	Clearing and Grubbing		
102.51	5	EA	Individual Tree Protection		
102.52	50	FT	Temporary Tree Protection Fence		
120.1	4,500	CY	Unclassified Excavation		
121.	10	CY	Class A Rock Excavation		
129.	550	SY	Pavement Milling		
145.	15	EA	Drainage Structure Abandoned		
146.	2	EA	Drainage Structure Removed		
151.6	4,500	CY	Gravel Borrow – Excluding cost of Gravel Borrow		
170.	10,800	SY	Fine Grading and Compacting		
201.	30	EA	Catch Basin		
205.	17	EA	Leaching Basin		
220.	2	EA	Drainage Structure Adjusted		
222.3	47	EA	Frame And Grate (Or Cover) Municipal Standard		
223.1	17	EA	Frame And Grate (Or Cover) Removed And Stacked		
225.52	30	EA	Trap And Hood Municipal Standard		
227.3	5	CY	Removal of Drainage Structure Sediment		
241.12	450	FT	12 Inch Reinforced Concrete Pipe		



Town of Nantucket

440.	40,500	LB	Calcium Chloride For Roadway Dust Control		
------	--------	----	---	--	--

RECONSTRUCTION OF THE BOULEVARDE BID PRICE FORM

ITEM	QUANT.	UNIT	DESCRIPTION	Unit Price	Amount
443.	15	MGL	Water For Roadway Dust Control		
460.	3,025	TON	Hot Mix Asphalt		
470.2	7,800	FT	Hot Mix Asphalt Berm, Type A – Modified		
472.	50	TON	Hot Mix Asphalt For Miscellaneous Work		
487.1	70	SY	Cobblestone Pavement Removed and Reset		
635.1	255	FT	Highway Guard Removed And Discarded		
655.01	100	FT	Wood Rail For Fencing		
655.02	10	EA	Wood Fence Post		
670.	350	FT	Fence Removed And Reset		
697.1	30	EA	Inlet Sediment Control Device		
715.	13	EA	Rural Mail Box Removed And Reset		
716.	4	EA	Street Address Marker Removed And Reset		
716.1	3	EA	Street Address Post Removed And Reset		
748.	1	LS	Mobilization		
751.	700	CY	Loam Borrow		
756.	1	LS	NPDES Stormwater Pollution Prevention Plan		
765.	700	SY	Seeding		



Town of Nantucket

767.12	50	FT	Compost Filter Tubes		
--------	----	----	----------------------	--	--

RECONSTRUCTION OF THE BOULEVARDE BID PRICE FORM

ITEM	QUANT.	UNIT	DESCRIPTION	Unit Price	Amount
830.	1	LS	Traffic Signing		
850.41	680	HR	Roadway Flagger		
852.	390	SF	Safety Signing For Traffic Management		
854.016	4,500	FT	Temporary Paving Markings - 6 Inch (Painted)		
856.12	60	DAY	Portable Changeable Message Sign		
859.	1,800	DAY	Reflectorized Drum		
866.112	150	FT	12 Inch Reflectorized White Line (Thermoplastic)		
867.106	4,250	FT	6 Inch Reflectorized Yellow Line (Thermoplastic)		
874.2	9	EA	Traffic Sign Removed And Reset		
874.41	9	EA	Traffic Sign Removed And Discarded		
				<i>Bid Total</i>	

Date: _____

(Signature of Bidder)

By: _____
(Name of Person Signing Bid and Title)

(Business Address)

Phone



Town of Nantucket

(City, State and Zip)



Town of Nantucket

WEEKLY PAYROLL RECORDS REPORT & STATEMENT OF COMPLIANCE

In accordance with Massachusetts General Law c. 149, §27B, a true and accurate record must be kept of all persons employed on the public works project for which the enclosed rates have been provided. A Payroll Form has been printed on the reverse of this page and includes all the information required to be kept by law. Every contractor or subcontractor is required to keep these records and preserve them for a period of three years from the date of completion of the contract.

In addition, every contractor and subcontractor is required to submit a copy of their weekly payroll records to the awarding authority. For every week in which an apprentice is employed, a photocopy of the apprentice's identification card must be attached to the payroll report. Once collected, the awarding authority is also required to preserve those records for three years.

In addition, each such contractor, subcontractor, or public body shall furnish to the awarding authority directly, within fifteen days after completion of its portion of the work a statement, executed by the contractor, subcontractor or public body who supervises the payment of wages, in the following form:

STATEMENT OF COMPLIANCE

_____, 20____

I, _____,
(Name of signatory party) (Title)

do hereby state:

That I pay or supervise the payment of the persons employed by

_____ on the _____
(Contractor, subcontractor or public body) (Building or project)

and that all mechanics and apprentices, teamsters, chauffeurs and laborers employed on said project have been paid in accordance with wages determined under the provisions of sections twenty-six and twenty-seven of chapter one hundred and forty nine of the General Laws.

Signature _____

Title _____



Town of Nantucket

MASSACHUSETTS WEEKLY CERTIFIED PAYROLL REPORT FORM



Company's Name:		Address:		Phone No.:		Payroll No.:												
Employer's Signature:		Title:		Contract No.:		Tax Payer ID No.:												
Awarding Authority's Name:		Public Works Project Name:		Public Works Project Location:		Min. Wage Rate Sheet No.:												
General / Prime Contractor's Name:		Subcontractor's Name:		"Employee" Hourly Fringe Benefit Contributions														
Employee Name & Complete Address	Employee is OSHA 10 Certified (Y)	Work Classification:	Appr. Rate (\$)	Hours							Project Hours (A)	Hourly Base Wage (B)	Health & Welfare Insurance (C)	ERISA Pension Plan (D)	Supp. Unemp. (E)	Total Hourly Prev. Wage (F)	Project Gross Wages (G)	Check No. (H)
				Worked														
	<input type="checkbox"/>			Su.	Mo.	Tu.	We.	Th.	Fr.	Sa.	All Other Hours							
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	
	<input type="checkbox"/>																	

NOTE: Pursuant to MGL Ch. 149 s.27B, every contractor and subcontractor is required to submit a "true and accurate" copy of their weekly payroll records directly to the awarding authority. Failure to comply may result in the commencement of a criminal action or the issuance of a civil citation.

Page _____ of _____

Date received by awarding authority
/ /



Town of Nantucket

AGREEMENT BETWEEN THE TOWN OF NANTUCKET, MASSACHUSETTS AND INDEPENDENT CONTRACTOR

THIS AGREEMENT made effective _____, 2016, by and between the **TOWN OF NANTUCKET, MASSACHUSETTS**, a municipal corporation, acting by and through its Town Administrator, with offices at Town Hall, Nantucket, Massachusetts 02554 (hereinafter called the "TOWN"), and **xxxxxxxxxx** whose principal office address and state of incorporation are as set forth on Exhibit A (hereinafter called the "CONTRACTOR").

RECITALS:

WHEREAS, the TOWN desires to retain the CONTRACTOR to provide certain services for the TOWN as described, below, and the CONTRACTOR is willing to accept such engagement, all on the terms hereinafter set forth,

NOW, THEREFORE, in consideration of the mutual covenants hereinafter set forth, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

ARTICLE 1 - ENGAGEMENT OF THE CONTRACTOR

- 1.1 The TOWN hereby engages the CONTRACTOR, and the CONTRACTOR hereby accepts the engagement, to perform certain services for the TOWN, as described in Article 2.
- 1.2. In the performance of any service under this Agreement, the CONTRACTOR acts at all times as an independent contractor. There is no relationship of employment or agency between the TOWN, on the one hand, and the CONTRACTOR on the other, and the TOWN shall not have or exercise any control or direction over the method by which the CONTRACTOR performs its work or functions aside from such control or directions which are consistent with the independent contractor relationship contemplated in the Agreement.

ARTICLE 2 - SERVICES OF THE CONTRACTOR

- 2.1 The CONTRACTOR will perform the services described in the Scope of Services set forth on Exhibit A (the "Work").
- 2.2 The CONTRACTOR shall report, and be responsible, to the TOWN and its designee (if any) as set forth on Exhibit A.
- 2.3 There shall be no amendment to the Scope of Services or Work provided for in this Agreement without the written approval of the TOWN. The TOWN shall be under no obligation to pay for any services performed by the CONTRACTOR which are not explicitly agreed to by the TOWN in writing.
- 2.4 The CONTRACTOR represents and warrants to the TOWN that the CONTRACTOR (including all of its personnel, whether employees, agents or independent contractors) will be qualified and duly licensed (if necessary) to perform the services required by this Agreement and further agrees to perform services in a professional manner adhering to a reasonable standard of care and in accordance with all applicable



Town of Nantucket

local, state or federal ordinances, laws, rules and regulations. The CONTRACTOR will obtain any and all permits, bonds and other items required for the proper and legal performance of the work.

- 2.5 The CONTRACTOR represents and warrants to the TOWN that it is not a party to any agreement; contract or understanding which would in any way restricts or prohibits it from undertaking or performing its obligations hereunder in accordance with the terms and conditions of this Agreement.
- 2.6 All written materials and any other documents (whether in the form of "hard" copies, graphics, magnetic media or otherwise) which are produced by the CONTRACTOR pursuant to this Agreement shall be deemed to be "work for hire" and shall be and become the property of the TOWN under applicable law or, to the extent that the "work for hire" doctrine does not apply, CONTRACTOR hereby grants to the TOWN a perpetual, royalty-free exclusive license in such items. The TOWN acknowledges that such materials are being prepared with respect to the specific project contemplated hereby and that any reuse of such materials by the TOWN in connection with any other project shall be at the TOWN's sole risk unless otherwise agreed to by the CONTRACTOR in writing.

ARTICLE 3 - PERIOD OF SERVICES

- 3.1 Unless otherwise provided on Exhibit A, the term of this Agreement shall commence on the date hereof and continue until the Work is completed to the Town's reasonable satisfaction.
- 3.2 The CONTRACTOR shall proceed with the Work promptly after receiving authorization to proceed and will diligently and faithfully prosecute the Work to completion in accordance with the provisions hereof. In any event, the Work shall be completed no later than the date set forth on Exhibit A. The CONTRACTOR acknowledges that time is of the essence of this Agreement.
- 3.3 If the CONTRACTOR is delayed in the performance of any of its obligations under this Agreement by the occurrence of an event which may not reasonably be anticipated or avoided or is otherwise beyond its control such as fire or other casualty, abnormal adverse weather conditions, acts of God (collectively, "Unavoidable Events") which materially and adversely affect its ability to perform the Work, then the time for the CONTRACTOR to perform the Work shall be extended for such time as the TOWN shall reasonably determine is necessary to permit the CONTRACTOR to perform in light of the effects of the Unavoidable Event.

If an Unavoidable Event occurs which makes the performance of the Agreement impossible without the expenditure of additional TOWN funds, the TOWN may, at its option, elect to terminate this Agreement upon thirty (30) days written notice.

ARTICLE 4 - PAYMENTS TO THE CONTRACTOR

- 4.1 The compensation to due to the CONTRACTOR shall be paid in the amounts, and in the manner, set forth on Exhibit B, attached hereto.
- 4.2 The CONTRACTOR will bill the TOWN at the completion of the work unless otherwise provided on Exhibit B, with one or more invoices broken down to show the quantity of work performed and the percentage of the entire project completed, categories and amount of reimbursable expenses (if any), and provide such



Town of Nantucket

supporting data as may be required by the TOWN.

- 4.3 The TOWN will pay the CONTRACTOR upon review and approval of such invoices by the TOWN or its designee.
- 4.4 This project may be subject to budgetary restrictions which may limit the total amount of funds available for the work. Accordingly, unless otherwise stated on Exhibit B, the TOWN will not be obligated to pay any amount in excess of the maximum project amount without the express written approval of the TOWN.
- 4.5 The CONTRACTOR and its consultants shall not be compensated for any services involved in preparing changes that are required for additional work that should have been anticipated by the CONTRACTOR in the preparation of the documents, as reasonably determined by the TOWN.

ARTICLE 5 - TERMINATION

- 5.1 This Agreement may be terminated, with cause, by either the TOWN or CONTRACTOR, upon written notice given by the non-defaulting party. For the purposes of this provision, "cause" shall include the failure of a party to fulfill its material duties hereunder in a timely and proper manner.
- 5.2 The TOWN shall have the right to terminate this Agreement for its convenience upon ten (10) days written notice.
- 5.3 Following termination of this Agreement, the parties shall be relieved of all further obligations hereunder except:
 - (a) the TOWN shall remain liable for payments for the services and/or expenses of CONTRACTOR accrued prior to the effective date of the notice of termination in compliance with this Agreement (less all costs reasonably incurred by the TOWN as a result of the CONTRACTOR's default, if any), as determined by the TOWN but for no other amounts including, without limitation, claims for lost profits on work not performed; and
 - (b) The CONTRACTOR shall remain liable for any damages, expenses or liabilities arising under this Agreement (including its indemnity obligations) with respect to work performed pursuant to the Agreement.

ARTICLE 6 - INSURANCE AND INDEMNIFICATION

6.1 The CONTRACTOR agrees to indemnify and save the TOWN harmless from any and all manner of suits, claims, or demands arising out of any errors, omissions or negligence by CONTRACTOR (including all its employees, agents and independent contractors) in performing the Work, or any breach of the terms of this Agreement by such CONTRACTOR and shall reimburse the TOWN for any and all costs, damages and expenses, including reasonable attorney's fees, which the TOWN pays or becomes obligated to pay, by reason of such activities, or breach. The provisions of this Section 6.1 shall be in addition to, and shall not be construed as a limitation on, any other legal rights of the TOWN with respect to the CONTRACTOR, in connection with this Agreement.



Town of Nantucket

- 6.2 Before commencing work, the CONTRACTOR shall obtain and maintain, at its expense and from insurance companies of a Best Rating of A or better which are licensed to do business in the Commonwealth of Massachusetts, insurance as set forth below. If the CONTRACTOR is permitted to sub-contract a material portion of the Work, or is otherwise identifying a third party to perform services for the Town, the CONTRACTOR shall assure that such sub-contractor or other third party also has such insurance.
- (a) Workers' Compensation, covering the obligations of the CONTRACTOR in accordance with applicable Workers' Compensation or Benefits laws.
 - (b) Commercial General Liability Insurance on an occurrence basis with a combined single limit of not less than \$1 million. Coverage is to include premises and operations, coverage for liability of subcontractors. The policy shall contain an endorsement stating that the aggregate limits will apply separately to the work being performed under this Agreement.
 - (c) Automobile Liability Insurance of not less than \$1 million combined single limit covering owned, hired and non-hired vehicle use.
 - (d) Such additional insurance as may be required to be carried by the CONTRACTOR by law.
 - (e) Such additional insurance as the TOWN may reasonably require as set forth on Exhibit A.

CONTRACTOR shall maintain such insurance during the term of Agreement and give the TOWN twenty (20) days written notice of any change or cancellation of coverage. Each insurer providing policies hereunder shall waive its rights to subrogate claims against the TOWN. The TOWN will be added as an additional named insured with respect to each such policy and such endorsement shall be reflected on a Certificate of Insurance to be delivered to the TOWN upon the execution of this Agreement and at such times thereafter as the TOWN may reasonably request.

ARTICLE 7 - GENERAL PROVISIONS

- 7.1 Upon the expiration or the termination of this Agreement for any reason, all data, drawings, specifications, reports, estimates, summaries and other work product which have been accumulated, developed or prepared by the CONTRACTOR (whether completed or in process) shall become the property of the TOWN and the CONTRACTOR shall immediately deliver or otherwise make available all such material to the TOWN.
- 7.2 Neither party may assign, transfer or otherwise dispose of this Agreement or any of its rights hereunder or otherwise delegate any of its duties hereunder without the prior written consent of the other party, and any such attempted assignment or other disposition without such consent shall be null and void and of no force and effect.
- 7.3 Except as otherwise expressly provided in this Agreement, any decision or action made by the TOWN relating to this Agreement, its operation, amendment or termination, shall be made by the Board, Committee or Authority of the TOWN specified in the initial paragraph of this Agreement, unless



Town of Nantucket

specifically authorized or delegated by a lawful vote of such body.

- 7.4 This Agreement, together with Exhibit A (Contractor, Scope of Work, Term), Exhibit B (Payments) and Exhibit C (Tax Compliance Certificate) and any additional exhibits referred to therein, constitute the entire agreement of TOWN and CONTRACTOR with respect to the matters set forth therein and may not be changed, amended, modified or terms waived except by a writing signed by TOWN and CONTRACTOR. If there is any conflict between a term set forth in the body of this Agreement and a term set forth on Exhibit A or Exhibit B hereto, the term set forth in the Exhibit shall govern; however, if any term or provision of any document attached hereto or incorporated by reference conflicts with a term of this Agreement (including the Exhibits listed above), the term of the Agreement shall govern. Any notices required or allowed shall be to the person's address above by certified mail, return receipt requested.
- 7.5 This Agreement is governed by the law of The Commonwealth of Massachusetts and shall be construed in accordance therewith. The parties agree that exclusive jurisdiction for any action arising out of or relating to this Agreement shall lie with the state and federal courts having jurisdiction over the county and state in which the Town is located and the parties hereby irrevocably waive, to the fullest extent permitted by law, any objection which they may now or hereafter have to the venue of any proceeding brought in such location and further irrevocably waive any claims that any such proceeding has been brought in an inconvenient forum.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first written above.

TOWN OF NANTUCKET,
MASSACHUSETTS:

CONTRACTOR:

C. Elizabeth Gibson
Town Manager

Name
President

Funding Org/Obj:

FEIN:

Approved as to Funds Available

Finance



Town of Nantucket

EXHIBIT A

CONTRACTOR, SCOPE OF WORK, TERM

1. Name of Contractor:
2. State of Incorporation:
3. Principal Office Address:
4. Description of Services (§2.1):
5. Person, Department, or Committee, if any, to whom CONTRACTOR reports (§ 2.2):
Silvio Genao, P.E., Town Engineer 508-228-7244
6. Term of Agreement (§3.1): Signature date through Project Completion
7. Completion Date (§3.2):
8. Additional Insurance Coverage (§6.2(e)):



Town of Nantucket

EXHIBIT B

PAYMENTS

1. Lump Sum Method

a. **Maximum Project Amount:** Not to Exceed *Estimated Bid Cost*.

b. **Payment Increments:**

CONTRACTOR shall submit invoices for completed work for approval and processing by the TOWN.

c. **Reimbursable Expenses (if any):** None.



Town of Nantucket

EXHIBIT C

TAX COMPLIANCE CERTIFICATION

Pursuant to M.G.L. 62C, Sec.49A, the undersigned certifies under the penalties of perjury that it, to the best knowledge and belief of management, has filed all state tax returns and paid all state taxes required under law (if any, are so required).

By:

Name, President

Date

FEIN:



Town of Nantucket

BIDDER'S CHECKLIST

Required for bid submittals:

- ☐ Bid Price Form
- ☐ Certificate of Non Collusion
- ☐ Tax compliance certificate
- ☐ Quality Requirements
- ☐ Reference list
- ☐ Signature page form Town of Nantucket contract agreement
- ☐ 5% Bid Deposit



Town of Nantucket

NOTICE TO PROCEED

Type of Project:

Name of Street:

Length:

Width:

Approximate Tonnage:

Start date:

Finish date:

Contractor agrees to stay within 5% \pm of the specified total tonnage or as agreed upon before work proceeds.

Director, Public Works

Contractor

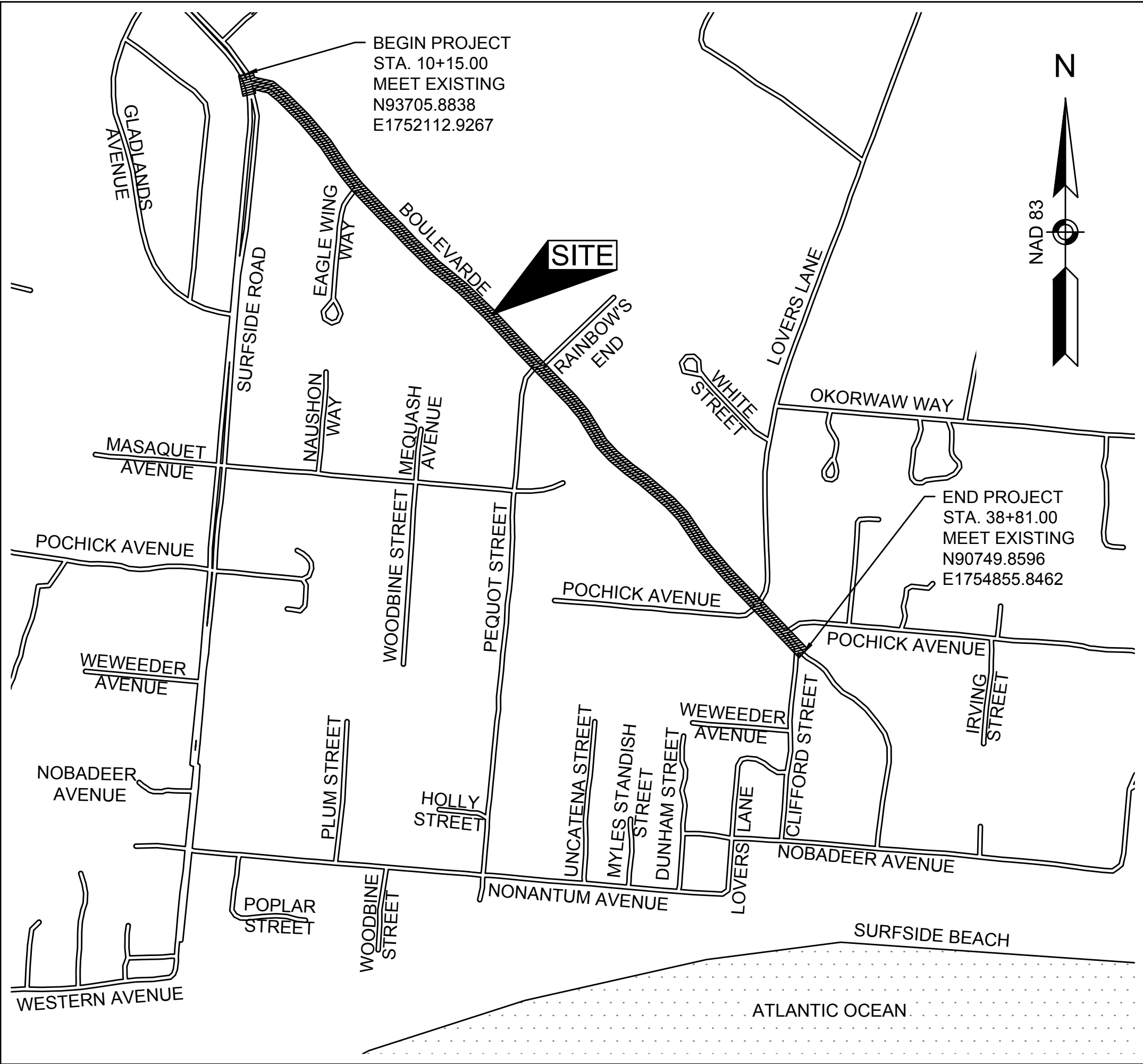
Date

Date

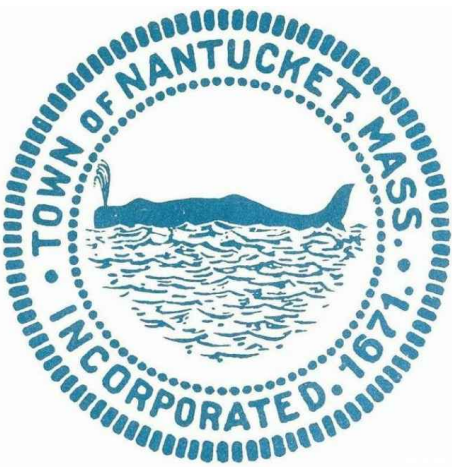
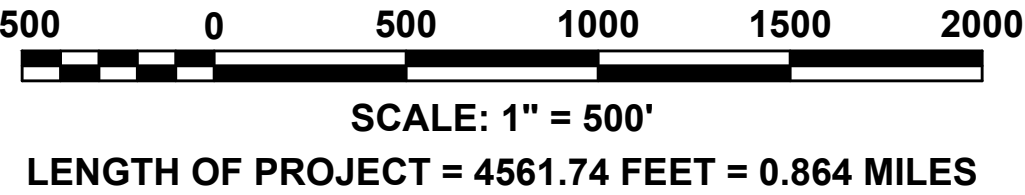
BOULEVARDE RECONSTRUCTION
IN THE TOWN OF
NANTUCKET
NANTUCKET COUNTY

THE MASSACHUSETTS HIGHWAY DEPARTMENT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES DATED 1988, AS AMENDED, THE SUPPLEMENTAL SPECIFICATIONS DATED JULY 1, 2015, THE 2014 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE LATEST MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS WITH MASSACHUSETTS AMENDMENTS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK, WILL GOVERN.

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND & ABBREVIATIONS
3	TYPICAL SECTIONS
4-10	CONSTRUCTION PLANS & PROFILES
11-17	CURB TIE & GRADING PLANS
18-24	DRAINAGE & UTILITY PLANS
25-28	PAVEMENT MARKING & SIGNING PLANS
32	TRAFFIC SIGN SUMMARY
33-34	TEMPORARY TRAFFIC CONTROL PLANS
35	CONSTRUCTION DETAILS
36-58	CROSS SECTIONS



LOCATION MAP



TOWN MANAGER
C. ELIZABETH GIBSON

BOARD OF SELECTMEN
ROBERT DeCOSTA
MATTHEW FEE
RICK ATHERTON
TOBIAS GLIDDEN
DAWN E HILL HOLTGATE

GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA

COVER SHEET

BOULEVARDE
NANTUCKET

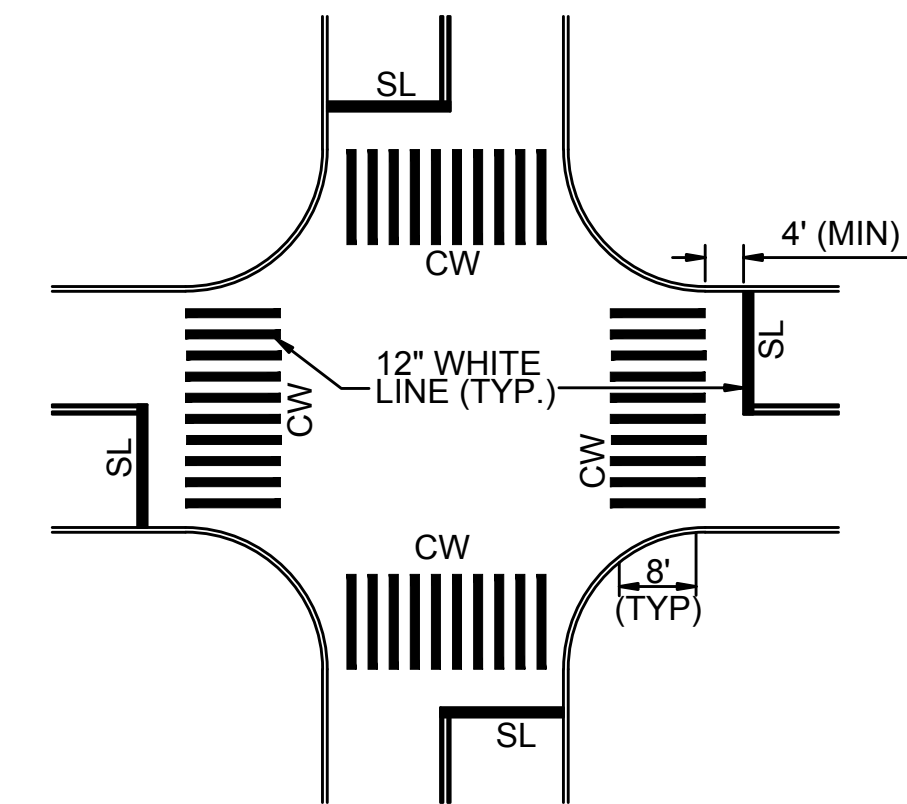
NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CS&LE
			DRAWING NO.:	
				1 OF 58

GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
JB	JB	JERSEY BARRIER
	□	LEACHING BASIN
CB	□	CATCH BASIN
		CATCH BASIN CURB INLET
FP	FP	FLAG POLE
GP	GP	GAS PUMP
MB	MB	MAIL BOX
□	□	POST SQUARE
○	○	POST CIRCULAR
WELL	WELL	WELL
EHH	EHH	ELECTRIC HANDHOLE
○	○	FENCE GATE POST
GG	GG	GAS GATE
BHL #	BHL #	BORING HOLE
MW #	MW #	MONITORING WELL
TP #	TP #	TEST PIT
		HYDRANT
*	*	LIGHT POLE
□ CO.BD.		TOWN BOUND
○		GPS POINT
○	○	CABLE MANHOLE
○	○	DRAINAGE MANHOLE
○	○	ELECTRIC MANHOLE
○	○	GAS MANHOLE
○	○	MISC MANHOLE
○	○	SEWER MANHOLE
○	○	TELEPHONE MANHOLE
○	○	WATER MANHOLE
MHB	MHB	MASSACHUSETTS HIGHWAY BOUND
□ MON		MONUMENT
□ SB		STONE BOUND
□ TB		TOWN OR CITY BOUND
Δ		TRAVERSE OR TRIANGULATION STATION
○ TPL or GUY	○ TPL or GUY	TROLLEY POLE OR GUY POLE
○ HTP		TRANSMISSION POLE
○ UFB	○ UFB	UTILITY POLE W/ FIREBOX
○ UPDL	○ UPDL	UTILITY POLE WITH DOUBLE LIGHT
○ ULT	○ ULT	UTILITY POLE W / 1 LIGHT
○ UPL	○ UPL	UTILITY POLE
○		BUSH
○		TREE
○		STUMP
		SWAMP / MARSH
○ WG	○ WG	WATER GATE
○ PM	○ PM	PARKING METER
---	---	OVERHEAD CABLE/WIRE
---	---	CURBING
100 --- 99 --- (Labeled)	100 ---	CONTOURS
--- (Labeled)	---	UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
--- (Labeled)	---	UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
--- (Labeled)	---	UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
--- (Labeled)	---	UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
--- (Labeled)	---	UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
--- (Labeled)	---	UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCE STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
---	---	WOOD FENCE
		HAY BALES/SILT FENCE/ COMPOST FILTER TUBE
		TREE LINE OR LIMIT OF CLEARING AND GRUBBING
---	---	SAWCUT LINE
---	---	TOP OR BOTTOM OF SLOPE
---	---	LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
---	---	BANK OF RIVER OR STREAM
---	---	BORDER OF WETLAND
---	---	100 FT WETLAND BUFFER
---	---	200 FT RIVERFRONT BUFFER
---	---	STATE HIGHWAY LAYOUT
---	---	TOWN OR CITY LAYOUT
---	---	COUNTY LAYOUT
---	---	RAILROAD SIDELINE
---	---	TOWN OR CITY BOUNDARY LINE
---	---	PROPERTY LINE OR APPROXIMATE PROPERTY LINE
---	---	EASEMENT

PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
ONLY	ONLY	PAVEMENT ARROW - WHITE
ONLY	ONLY	LEGEND "ONLY" - WHITE
---	SL	STOP LINE
---	CW	CROSSWALK
---	SWL	SOLID WHITE LINE
---	SYL	SOLID YELLOW LINE
---	BWL	BROKEN WHITE LINE
---	BYL	BROKEN YELLOW LINE
---	DWL	DOTTED WHITE LINE
---	DYL	DOTTED YELLOW LINE
---	DWLEx	DOTTED WHITE LINE EXTENSION
---	DYLEx	DOTTED YELLOW LINE EXTENSION
---	DBWL	DOUBLE WHITE LINE
---	DBYL	DOUBLE YELLOW LINE



TYPICAL CROSSWALK MARKINGS

NOT TO SCALE

GENERAL NOTES

- TOPOGRAPHICAL INFORMATION WAS PROVIDED TO GPI BY BRACKEN ENGINEERING, INC., ON SEPTEMBER 22,2015. WITH SUPPLEMENTAL SURVEY PROVIDED ON DECEMBER 9, 2015 AND FEBRUARY 9, 2016. MA TEL: (508)325-0044.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE EXACTLY AND TO PRESERVE ANY AND ALL UNDERGROUND UTILITIES. CALL "DIG-SAFE" 1-888-DIGSAFE (344-7233) AT LEAST 72 HOURS BEFORE COMMENCING CONSTRUCTION.
- WHERE AN EXISTING UNDERGROUND UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
- THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS FOR THE ALTERATION AND ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE TERM "PROPOSED" (PROP.) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS, OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE & RESET" (R&R).
- ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS NOTED OTHERWISE.
- ALL PROPOSED PAVEMENT MARKINGS SHALL BE THERMOPLASTIC.
- ALL EXISTING STATE, COUNTY, CITY AND TOWN LOCATION LINES AND PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATIONS ARE NOT GUARANTEED.
- ALL TRANSVERSE JOINTS, AND ALL LONGITUDINAL JOINTS BETWEEN NEW SURFACE PAVEMENT AND EXISTING SURFACE PAVEMENT TO REMAIN SHALL BE COATED WITH A HOT POURED RUBBERIZED ASPHALT SEALANT MEETING THE REQUIREMENTS OF MASSDOT ITEM 464.5.
- ALL DISTURBED AREAS NOT DESIGNATED TO BE PAVED SHALL HAVE LOAM BORROW PLACED AND SEEDED. THE LOAM BORROW SHALL HAVE A MINIMUM DEPTH OF 4 INCHES AND SHALL BE PLACED FLUSH WITH THE TOP OF THE ADJACENT CURB, EDGING, BERM OR PAVEMENT SURFACE.
- THE LIMIT OF WORK AREA SHALL BE THE STREET RIGHT OF WAY UNLESS SHOWN OTHERWISE.
- PRIOR TO THE START OF ANY NEW UTILITY WORK, ALL ELEVATIONS OF EXISTING UTILITIES IN THOSE AREAS ARE TO BE VERIFIED. THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY SHOULD ANY DISCREPANCIES OCCUR.
- ALL CASTINGS SHALL BE SET FLUSH WITH FINISHED GRADE.
- ALL PUBLICLY OWNED GATE BOXES, SERVICE BOXES, MANHOLE FRAMES AND COVERS SHALL BE ADJUSTED TO GRADE BY THE CONTRACTOR.
- ALL NEW SIDEWALK AND DRIVEWAY GRADES SHALL MATCH EXISTING GRADES AT BACK OF SIDEWALK LINE UNLESS SHOWN OTHERWISE ON THE PLANS AND CROSS-SECTIONS.
- THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PROTECT ALL EXISTING TREES AND ROOTS THAT ARE NOT DESIGNATED FOR REMOVAL.
- DRAINAGE ELEVATIONS ARE PROVIDED FOR DESIGN PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY BY TEST PIT, THE LOCATIONS OF EXISTING UTILITIES WHICH MAY CONFLICT WITH THE PROPOSED DRAINAGE DESIGN. ANY FIELD ADJUSTMENTS REQUIRED WILL BE MADE AS APPROVED OR DIRECTED BY THE ENGINEER. ONLY AFTER THE CONTRACTOR VERIFIES ELEVATIONS FOR THE CONSTRUCTABILITY OF THE DRAINAGE SYSTEM SHALL ANY STRUCTURES BE ORDERED. ANY FIELD ADJUSTMENTS TO LINE AND GRADE UP TO A DEPTH OF 5 FEET SHALL BE INCLUDED IN THE COST OF THE PIPE. PIPE EXCAVATION GREATER THAN 5 FEET WILL BE PAID UNDER CLASS B TRENCH EXCAVATION.

GENERAL ABBREVIATIONS

CR GR	CROWN GRADE	L	LENGTH OF CURVE	RD	ROAD	WIP	WROUGHT IRON PIPE
DHV	DESIGN HOURLY VOLUME	LB	LEACH BASIN	RDWY	ROADWAY	WM	WATER METER/WATER MAIN
DI	DROP INLET	LP	LIGHT POLE	REM	REMOVE	X-SECT	CROSS SECTION
DIA	DIAMETER	LT	LEFT	RET	RETAIN		
DIP	DUCTILE IRON PIPE	MAX	MAXIMUM	RET WALL	RETAINING WALL		
DW	STEADY DON'T WALK - PORTLAND ORANGE	MB	MAILBOX	ROW	RIGHT OF WAY		
DWY	DRIVEWAY	MH	MANHOLE	RR	RAILROAD		
ELEV (or EL.)	ELEVATION	MHB	MASSACHUSETTS HIGHWAY BOUND	R&R	REMOVE AND RESET		
EMB	EMBANKMENT	MIN	MINIMUM	R&S	REMOVE AND STACK		
EOP	EDGE OF PAVEMENT	NIC	NOT IN CONTRACT	RT	RIGHT		
EXIST (or EX)	EXISTING	NO.	NUMBER	SB	STONE BOUND		
EXC	EXCAVATION	PC	POINT OF CURVATURE	SHLD	SHOULDER		
F&C	FRAME AND COVER	PCC	POINT OF COMPOUND CURVATURE	SMH	SEWER MANHOLE		
F&G	FRAME AND GRATE	P.G.L.	PROFILE GRADE LINE	ST	STREET		
FDN.	FOUNDATION	PI	POINT OF INTERSECTION	STA	STATION		
FLDSTN	FIELDSTONE	POC	POINT ON CURVE	SSD	STOPPING SIGHT DISTANCE		
GAR	GARAGE	POT	POINT ON TANGENT	SHLO	STATE HIGHWAY LAYOUT LINE		
GD	GROUND	PRC	POINT OF REVERSE CURVATURE	SW	SIDEWALK		
GG	GAS GATE	PROJ	PROJECT	T	TANGENT DISTANCE OF CURVE/TRUCK %		
GI	GUTTER INLET	PROP	PROPOSED	TAN	TANGENT		
GIP	GALVANIZED IRON PIPE	PSB	PLANTABLE SOIL BORROW	TEMP	TEMPORARY		
GRAN	GRANITE	PT	POINT OF TANGENCY	TC	TOP OF CURB		
GRAV	GRAVEL	PVC	POINT OF VERTICAL CURVATURE	TOS	TOP OF SLOPE		
GRD	GUARD	PVI	POINT OF VERTICAL INTERSECTION	TYP	TYPICAL		
HDW	HEADWALL	PVT	POINT OF VERTICAL TANGENCY	UP	UTILITY POLE		
HMA	HOT MIX ASPHALT	PVMT	PAVEMENT	VAR	VARIES		
HOR	HORIZONTAL	PWW	PAVED WATER WAY	VERT	VERTICAL		
HYD	HYDRANT	R	RADIUS OF CURVATURE	VC	VERTICAL CURVE		
INV	INVERT	R&D	REMOVE AND DISPOSE	WCR	WHEEL CHAIR RAMP		
JCT	JUNCTION	RCP	REINFORCED CONCRETE PIPE	WG	WATER GATE		

GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

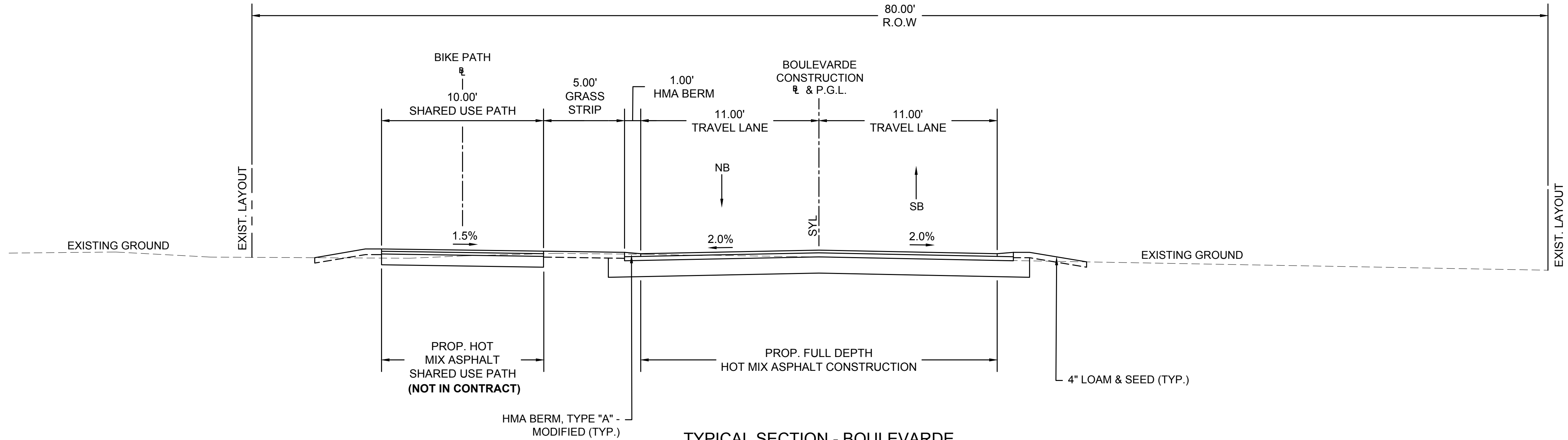
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

LEGEND & ABBREVIATIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CS&LE
			DRAWING NO.:	
				2 OF 58



TYPICAL SECTION - BOULEVARDE
SCALE 1" = 4'

PAVEMENT NOTES:

PROPOSED FULL DEPTH HMA CONSTRUCTION

SURFACE COURSE: 2" HMA SURFACE COURSE OVER
3" HMA INTERMEDIATE COURSE -

SUBBASE: 12" GRAVEL BORROW TYPE "B"

PROPOSED MILLING WITH HMA OVERLAY

SURFACE COURSE: 2" HMA SURFACE COURSE

SURFACE MILLING: 2" MILLING

TACK COAT: ASPHALT EMULSION TO BE APPLIED AT 0.07 GAL/SY OVER MICRO-MILLED SURFACE AND 0.05 GAL/SY OVER TIGHT PAVED SURFACES.

PROPOSED HOT MIX ASPHALT DRIVEWAYS

SURFACE COURSE: 1 1/2" HMA SURFACE COURSE OVER
2" HMA INTERMEDIATE COURSE

SUBBASE: 8" GRAVEL BORROW TYPE "B"

PROPOSED HMA SHARED USE PATH (NOT IN CONTRACT)

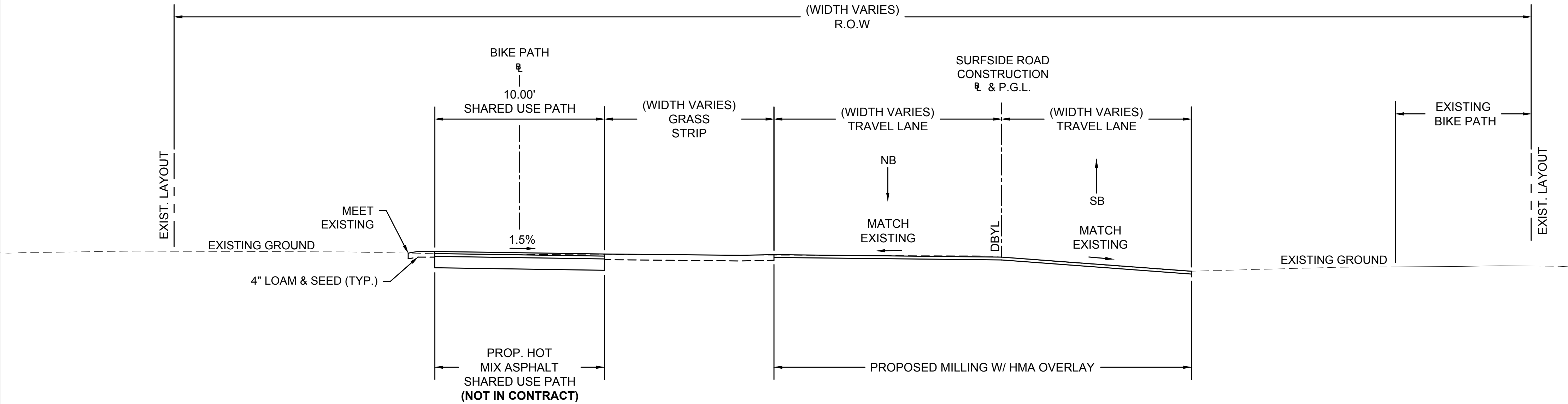
SURFACE COURSE: 1 1/2" HMA SURFACE COURSE OVER
2" HMA INTERMEDIATE COURSE

SUBBASE: 8" GRAVEL BORROW TYPE "B"

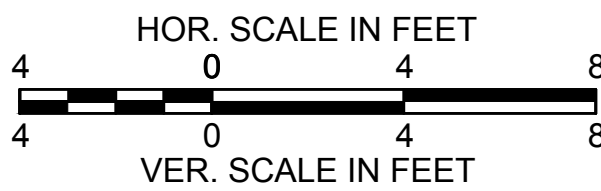
PROPOSED CEMENT CONCRETE WHEELCHAIR RAMPS (NOT IN CONTRACT)

SURFACE COURSE: 4" CEMENT CONCRETE (AIR ENTRAINED 4000 PSI, 3/4", 610) OVER

SUBBASE: 8" GRAVEL BORROW TYPE "B"



TYPICAL SECTION - SURFSIDE ROAD
SCALE 1" = 4'



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

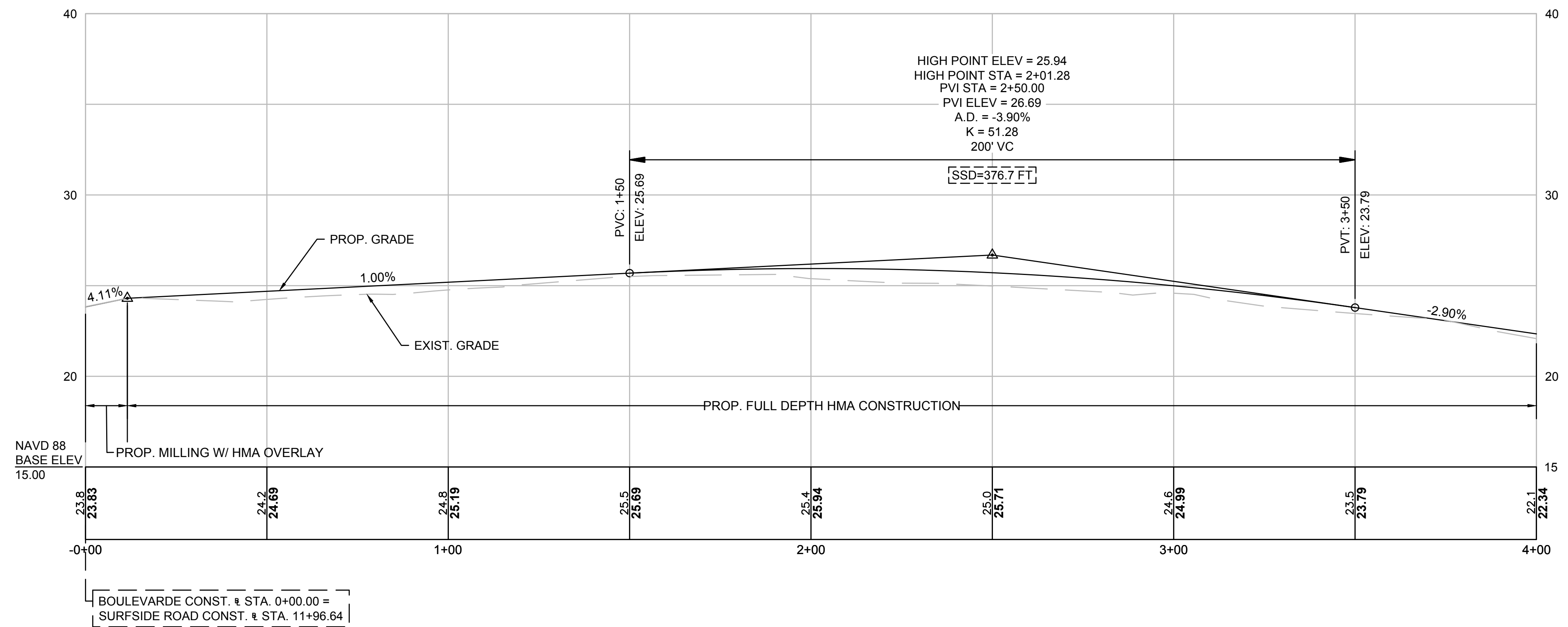
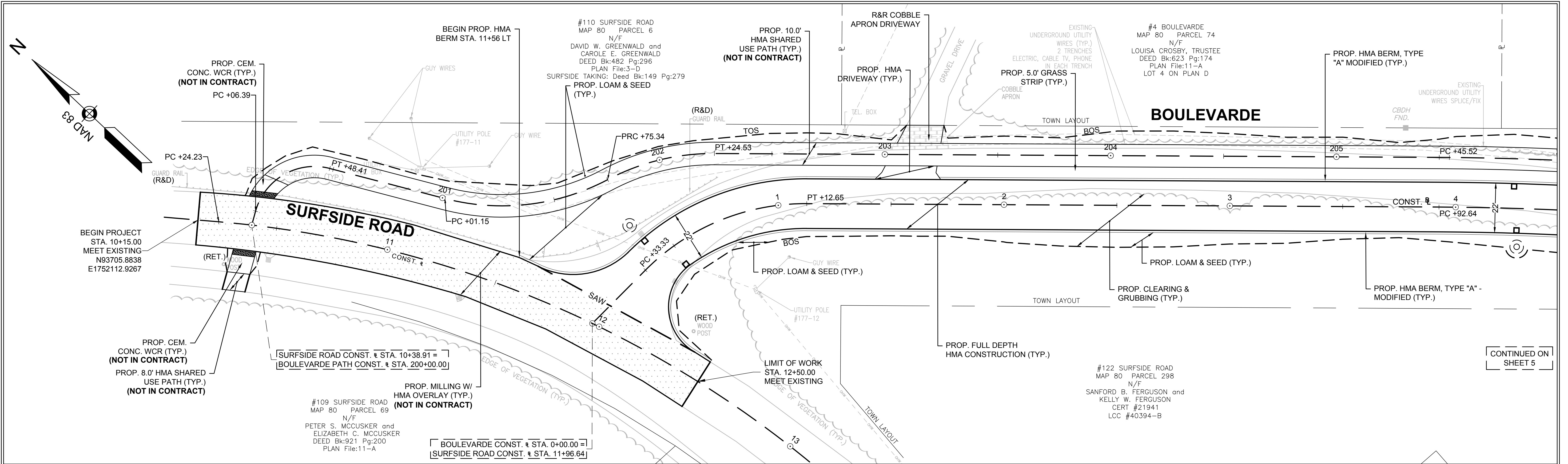
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

TYPICAL SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	TYP
			DRAWING NO.:	
				3 OF 58



20

0

20

40

4

0

4

8

HOR. SCALE IN FEET

VER. SCALE IN FEET

GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

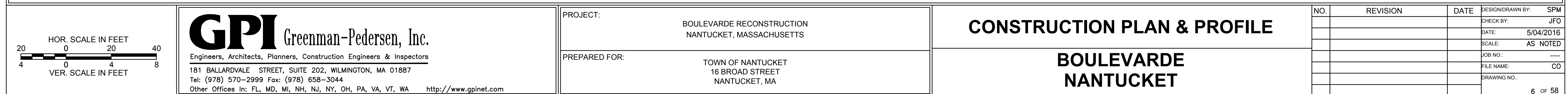
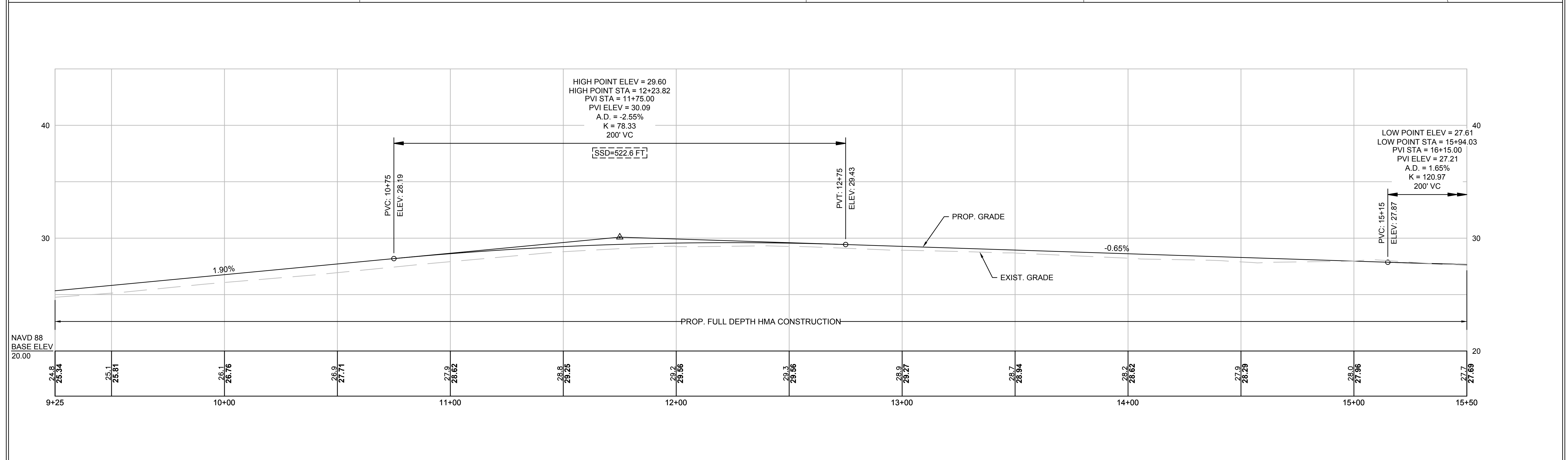
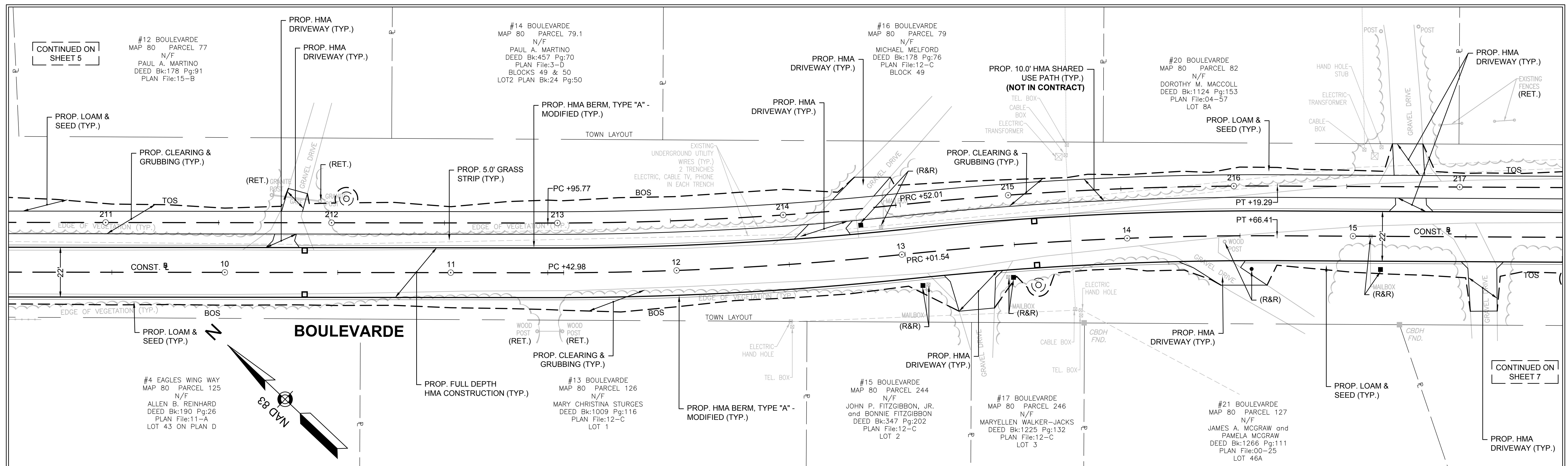
PREPARED FOR:

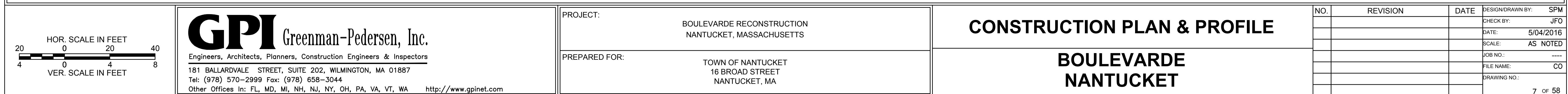
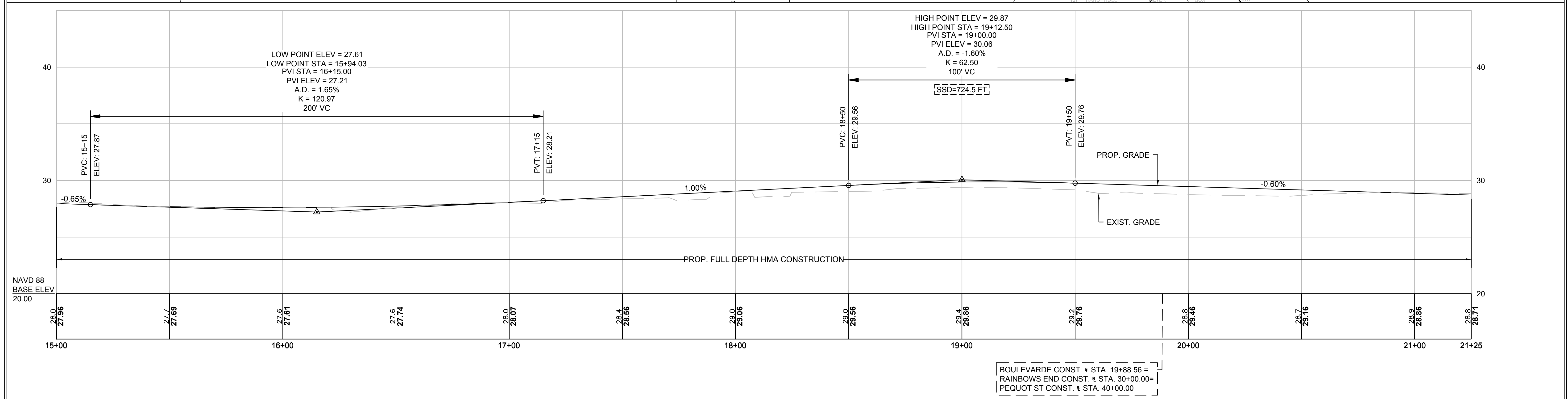
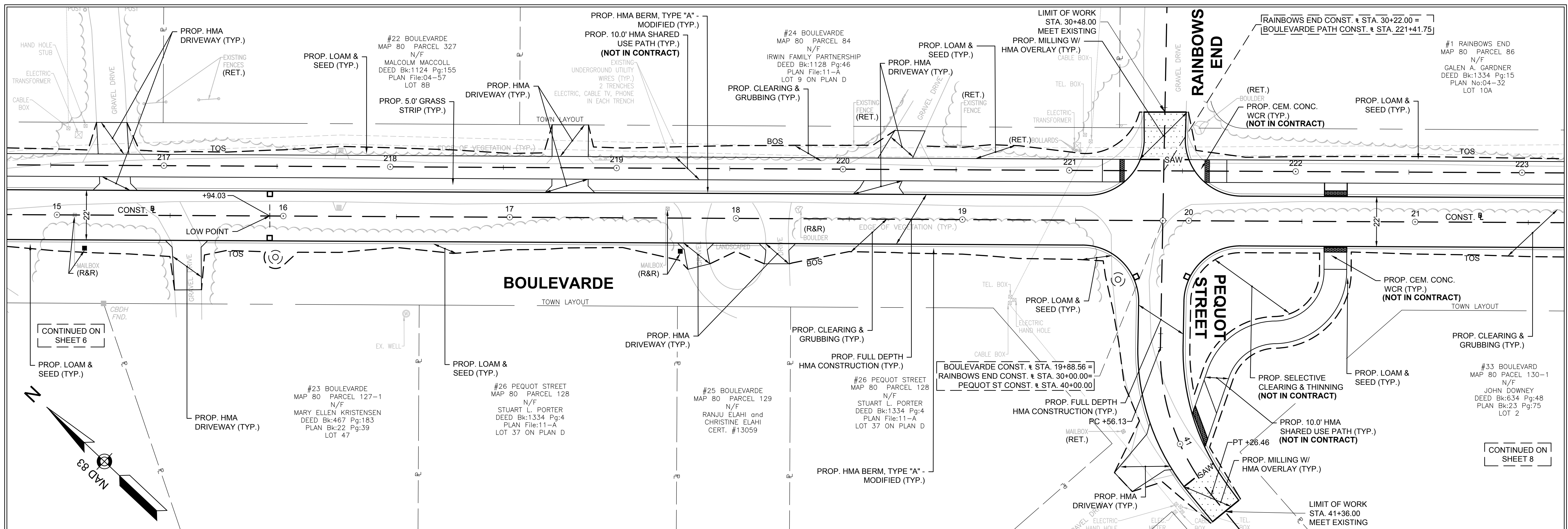
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

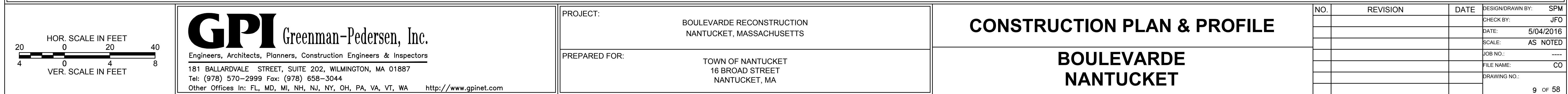
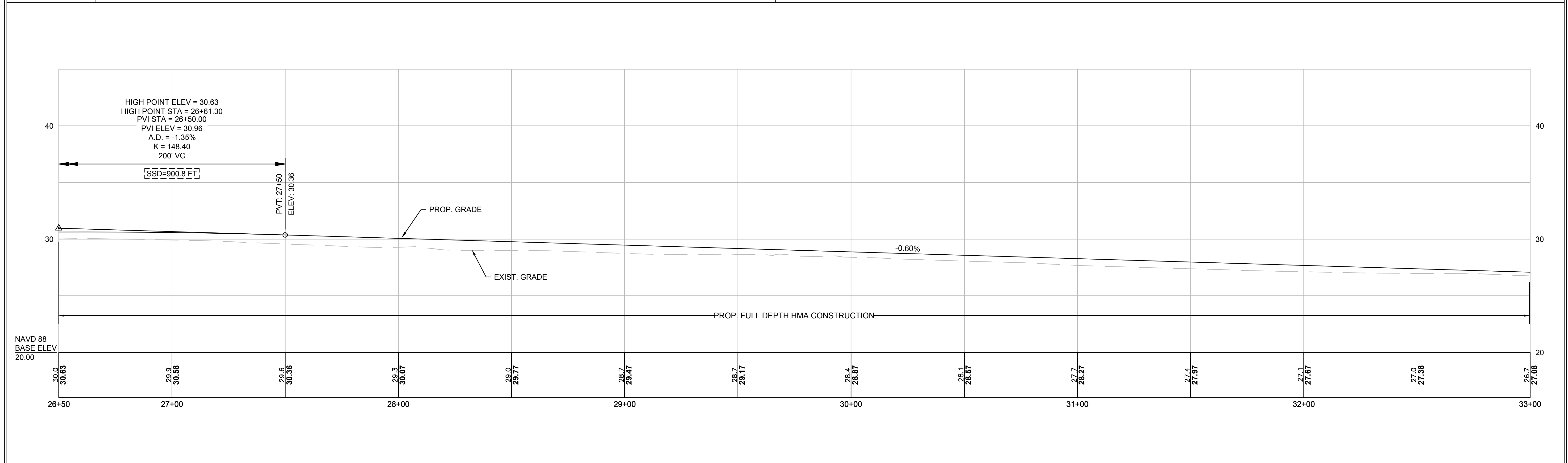
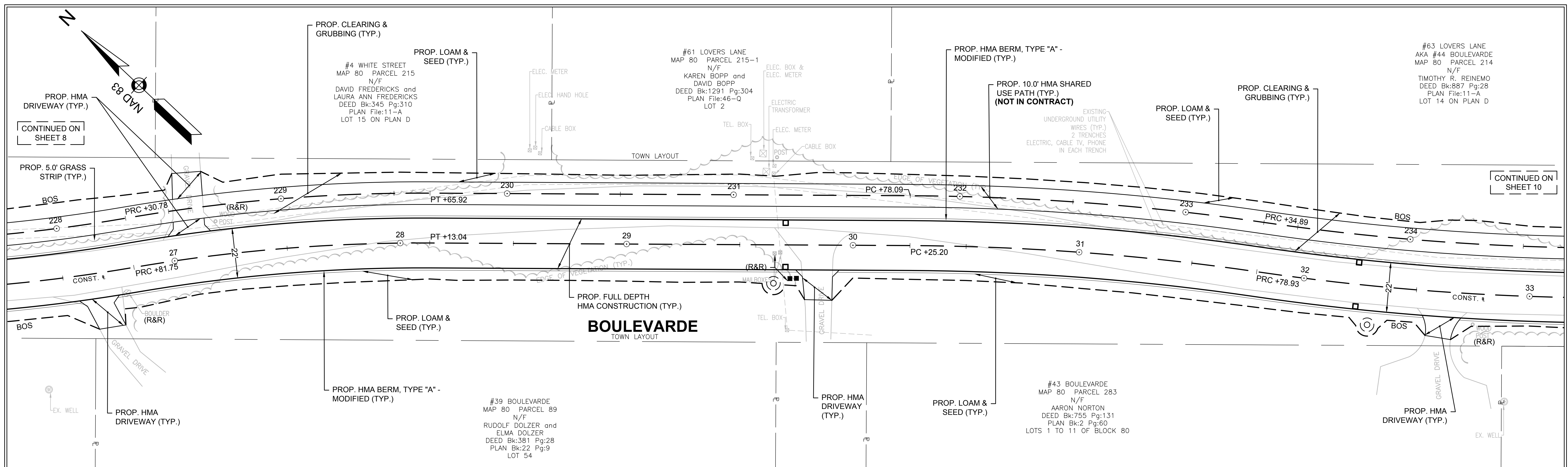
CONSTRUCTION PLAN & PROFILE

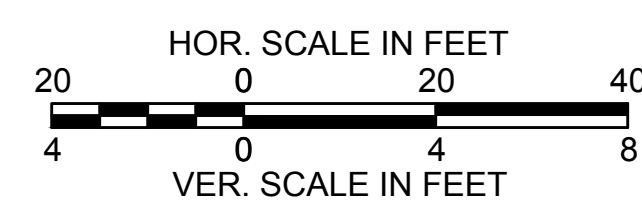
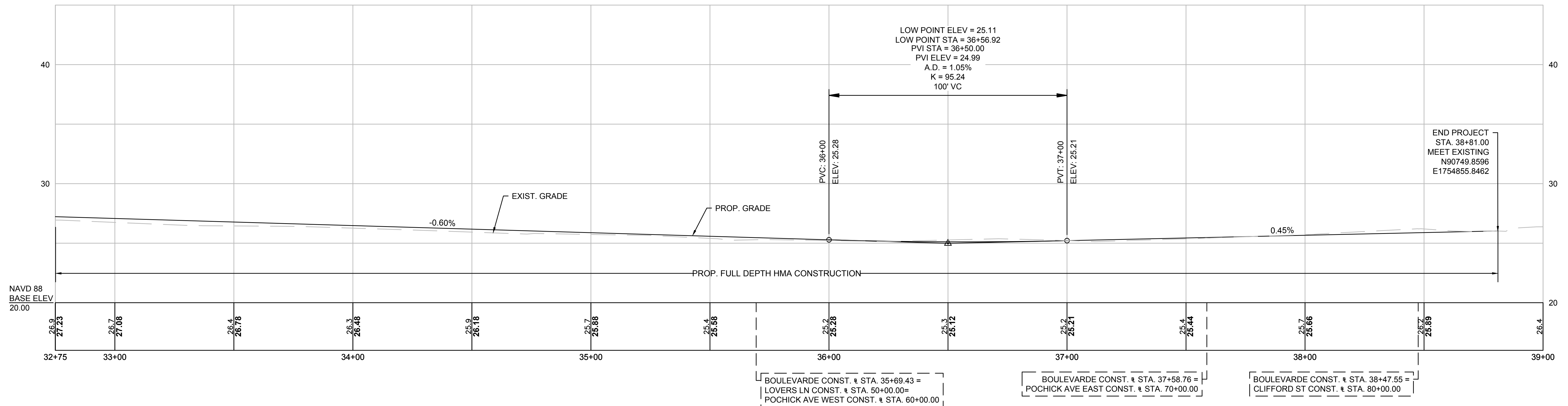
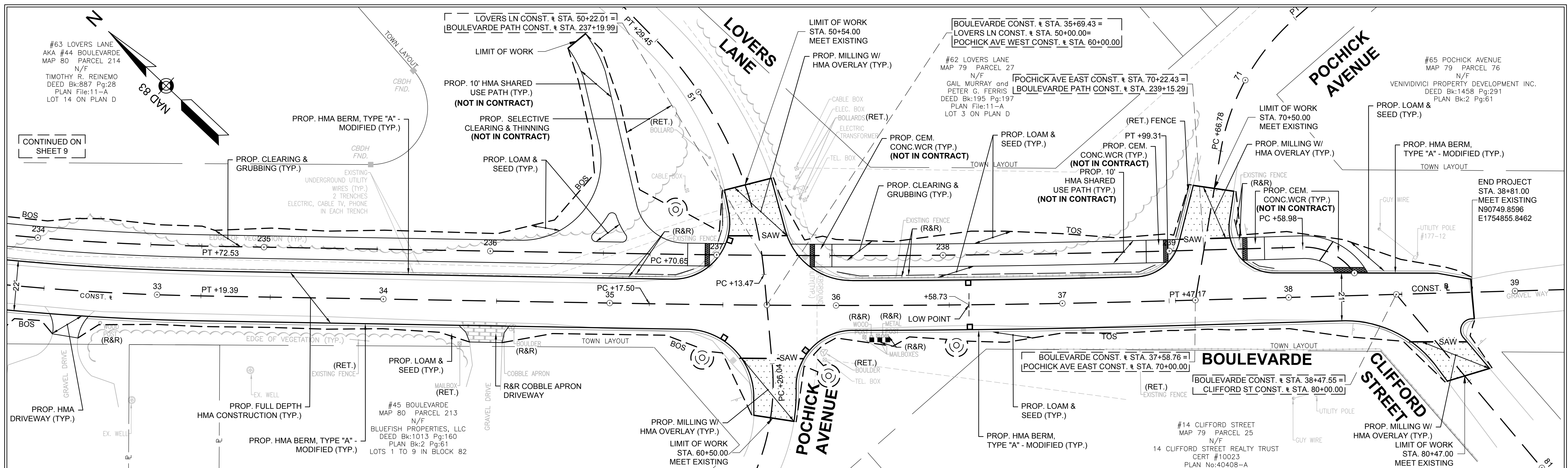
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CO
			DRAWING NO.:	
				4 OF 58









GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA

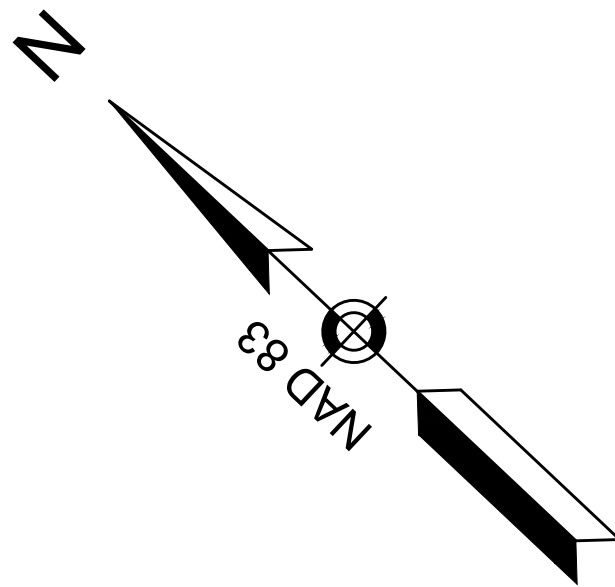
PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
----------	---

PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA
---------------	---

CONSTRUCTION PLAN & PROFILE

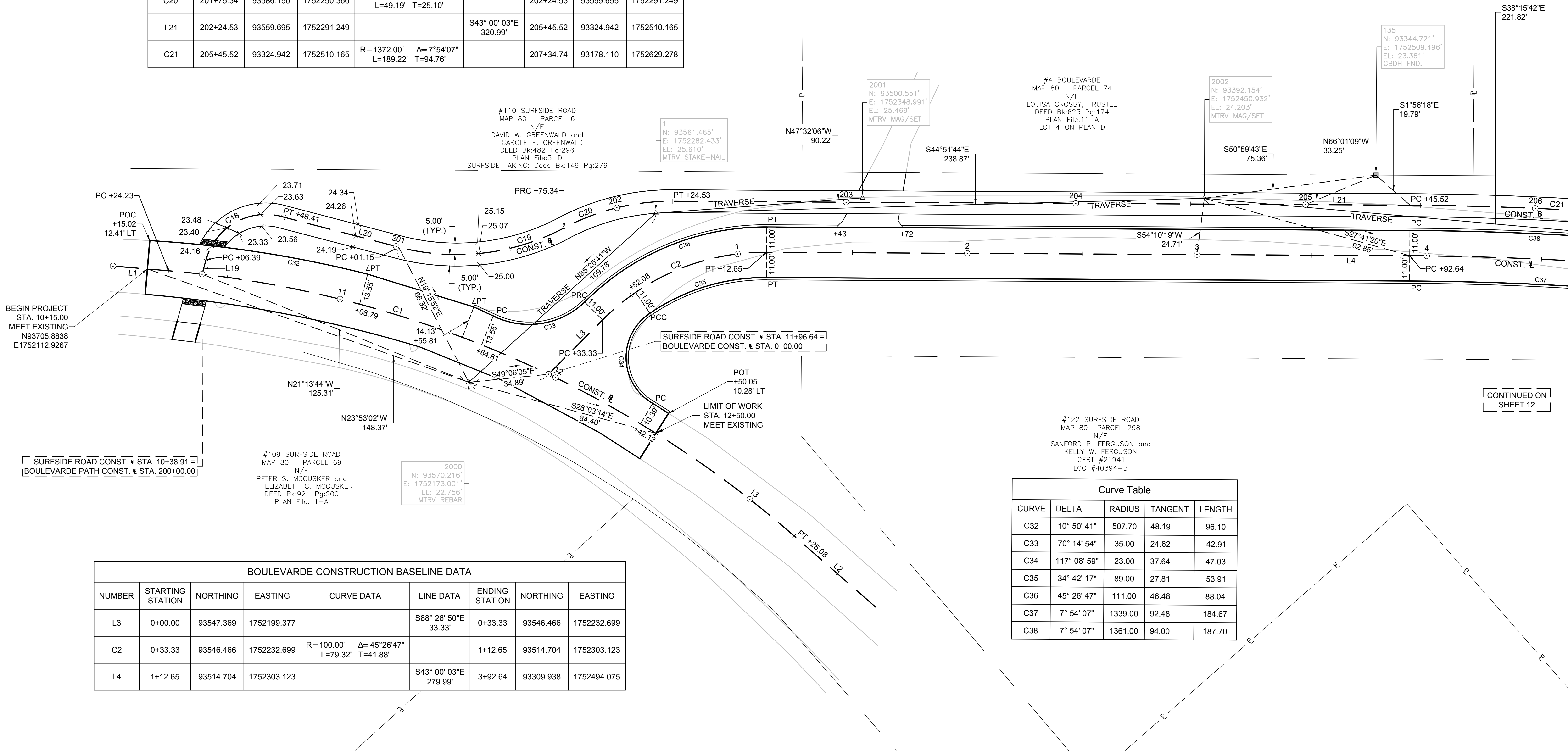
**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CO
			DRAWING NO.:	
				10 OF 58



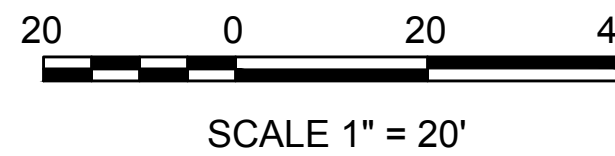
BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L19	200+00.00	93687.024	1752127.626		N62° 09' 16"E 6.39'	200+06.39	93690.010	1752133.278
C18	200+06.39	93690.010	1752133.278	R=27.00' Δ=89°10'17" L=42.02' T=26.61'		200+48.41	93679.091	1752169.578
L20	200+48.41	93679.091	1752169.578		S28° 40' 27"E 52.74'	201+01.15	93632.823	1752194.883
C19	201+01.15	93632.823	1752194.883	R=100.00' Δ=42°30'37" L=74.19' T=38.90'		201+75.34	93586.150	1752250.366
C20	201+75.34	93586.150	1752250.366	R=100.00' Δ=28°11'01" L=49.19' T=25.10'		202+24.53	93559.695	1752291.249
L21	202+24.53	93559.695	1752291.249		S43° 00' 03"E 320.99'	205+45.52	93324.942	1752510.165
C21	205+45.52	93324.942	1752510.165	R=1372.00' Δ=7°54'07" L=189.22' T=94.76'		207+34.74	93178.110	1752629.278

SURFSIDE ROAD CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	93717.627	1752103.594		S38° 28' 38"E 24.23'	10+24.23	93698.660	1752118.668
C1	10+24.23	93698.660	1752118.668	R=475.00' Δ=36°17'24" L=300.86' T=155.67'		13+25.08	93421.241	1752221.466
L2	13+25.08	93421.241	1752221.466		S2° 11' 14"E 47.01'	13+72.10	93374.261	1752223.260



BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L3	0+00.00	93547.369	1752199.377		S88° 26' 50"E 33.33'	0+33.33	93546.466	1752232.699
C2	0+33.33	93546.466	1752232.699	R=100.00' Δ=45°26'47" L=79.32' T=41.88'		1+12.65	93514.704	1752303.123
L4	1+12.65	93514.704	1752303.123		S43° 00' 03"E 279.99'	3+92.64	93309.938	1752494.075

Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C32	10° 50' 41"	507.70	48.19	96.10
C33	70° 14' 54"	35.00	24.62	42.91
C34	117° 08' 59"	23.00	37.64	47.03
C35	34° 42' 17"	89.00	27.81	53.91
C36	45° 26' 47"	111.00	46.48	88.04
C37	7° 54' 07"	1339.00	92.48	184.67
C38	7° 54' 07"	1361.00	94.00	187.70



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

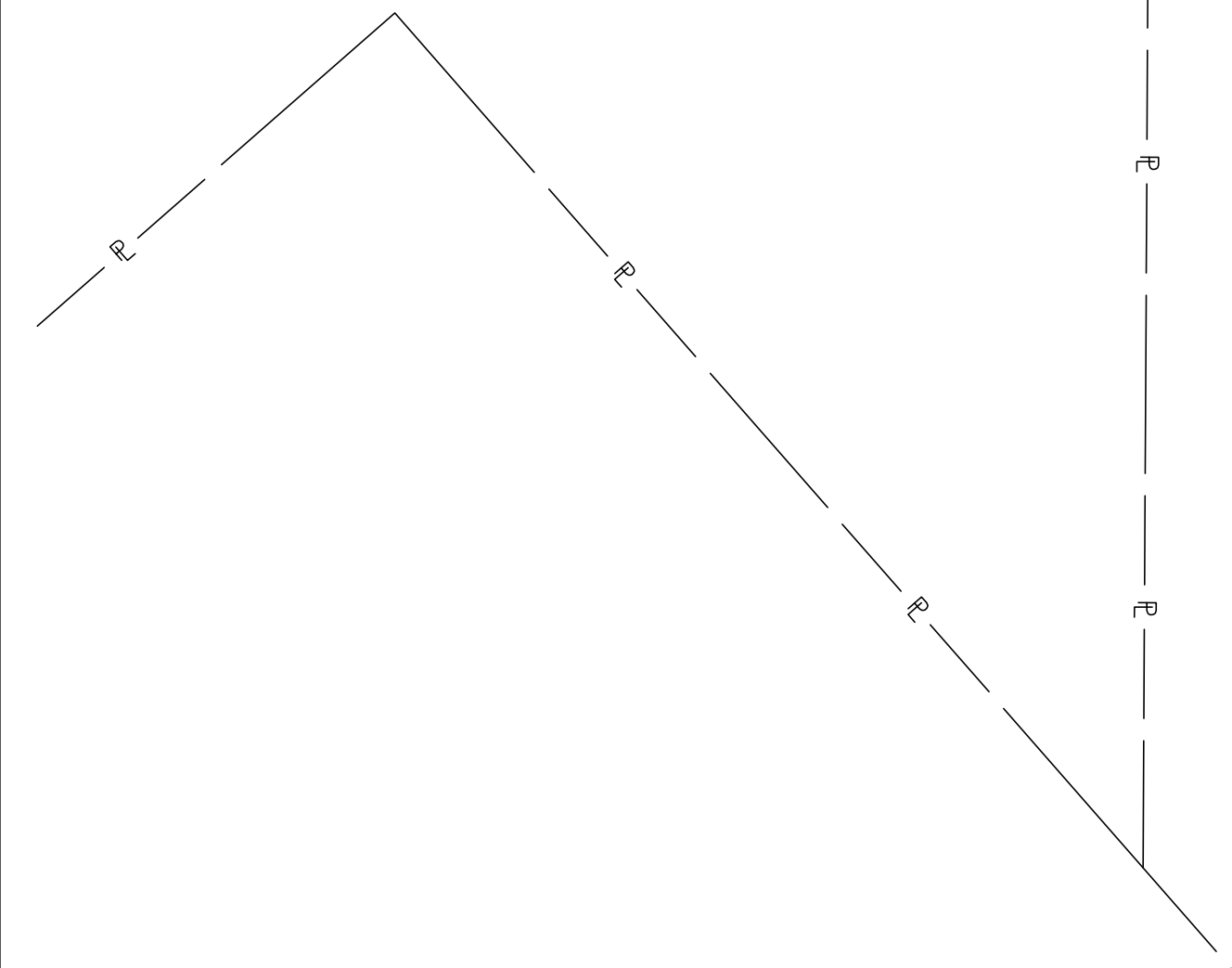
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

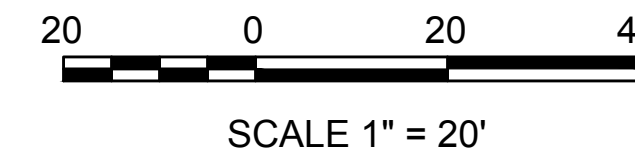
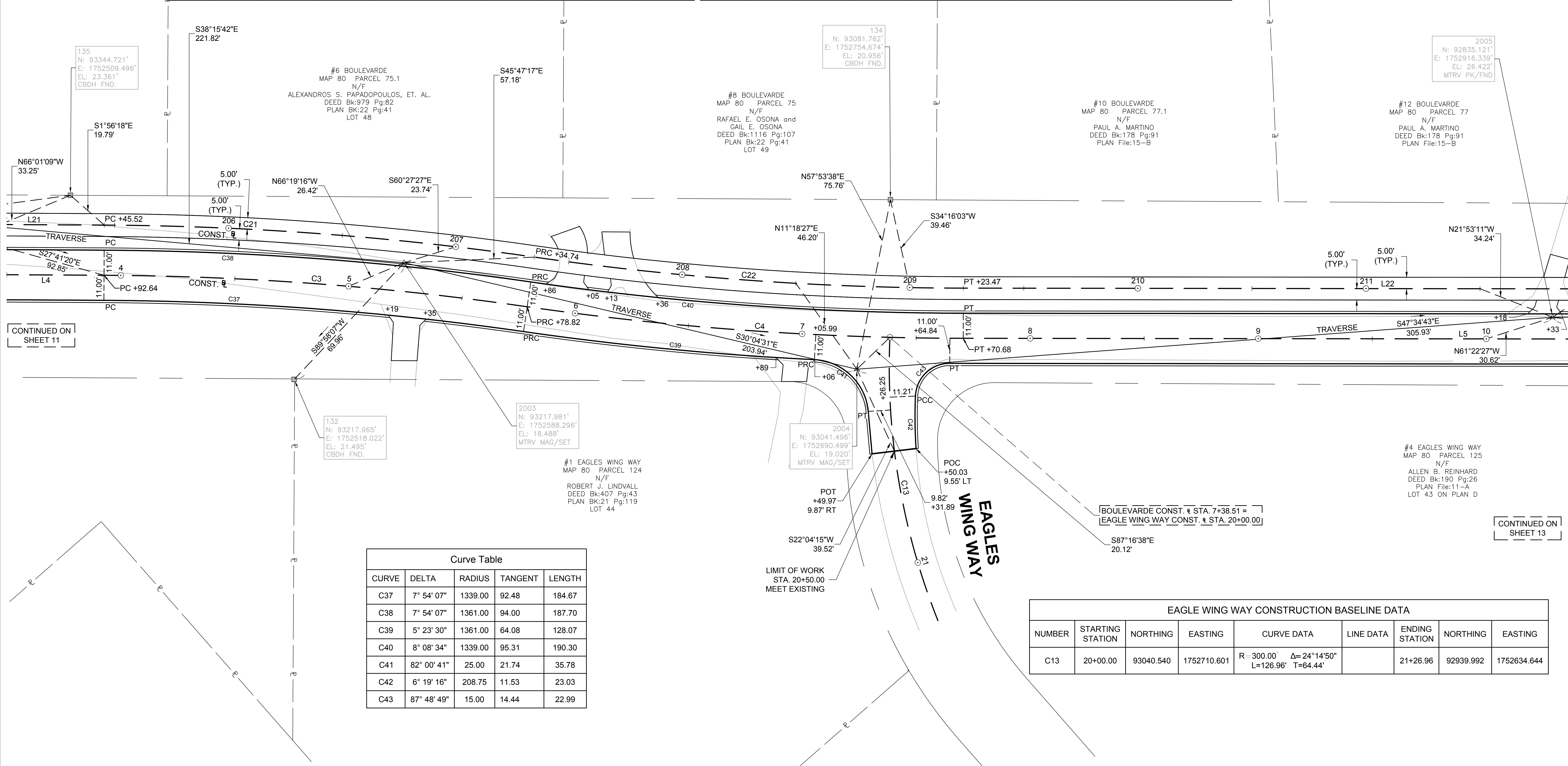
CURB TIE & GRADING PLAN

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	



BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L21	202+24.53	93559.695	1752291.249		S43° 00' 03"E 320.99'	205+45.52	93324.942	1752510.165
C21	205+45.52	93324.942	1752510.165	R = 1372.00' Δ= 7°54'07" L=189.22' T=94.76'		207+34.74	93178.110	1752629.278
C22	207+34.74	93178.110	1752629.278	R = 1328.00' Δ= 8°08'34" L=188.73' T=94.53'		209+23.47	93031.915	1752748.386
L22	209+23.47	93031.915	1752748.386		S43° 14' 30"E 372.30'	212+95.77	92760.707	1753003.438



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors

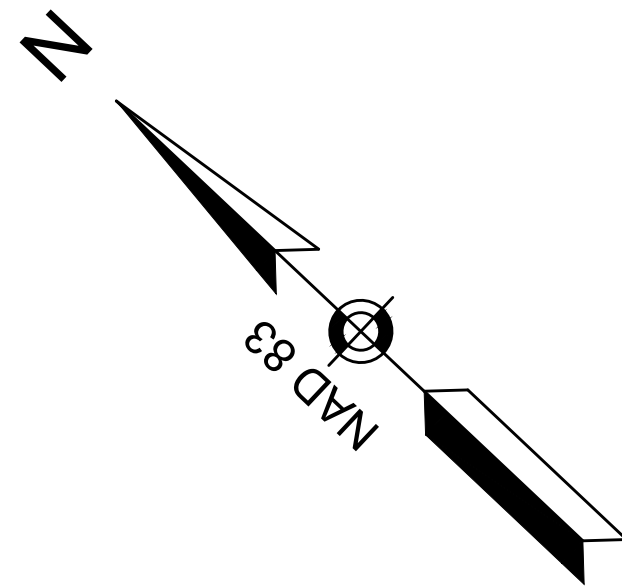
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MA, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA

CURB TIE & GRADING PLAN

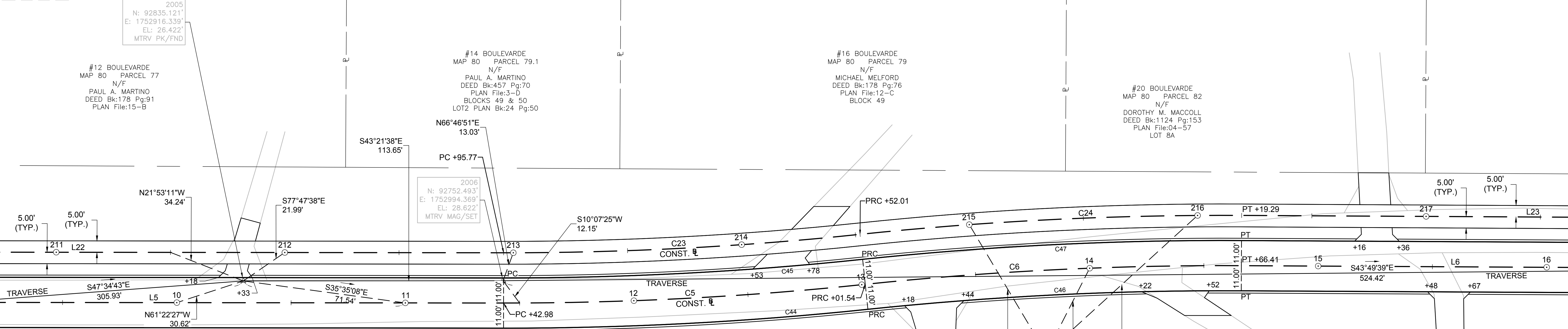
BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB:
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	
				12 OF 58



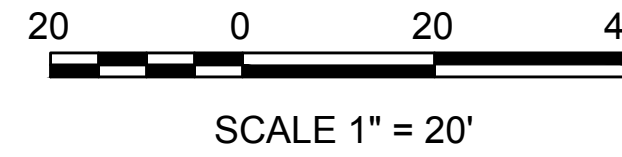
CONTINUED ON
SHEET 12

BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L22	209+23.47	93031.915	1752748.386		S43° 14' 30"E 372.30'	212+95.77	92760.707	1753003.438
C23	212+95.77	92760.707	1753003.438	R=1478.00' L=156.24' Δ=6°03'24" T=78.19'		214+52.01	92652.756	1753116.284
C24	214+52.01	92652.756	1753116.284	R=1522.00' L=167.28' Δ=6°17'51" T=83.73'		216+19.29	92536.923	1753236.860
L23	216+19.29	92536.923	1753236.860		S43° 00' 03"E 845.35'	224+64.65	91918.679	1753813.398



Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C44	6° 03' 24"	1511.00	79.94	159.73
C45	6° 03' 24"	1489.00	78.77	157.40
C46	6° 17' 51"	1489.00	81.91	163.66
C47	6° 17' 51"	1511.00	83.12	166.08

BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L5	7+70.68	93016.843	1752732.360		S43° 14' 30"E 372.30'	11+42.98	92745.635	1752987.412
C5	11+42.98	92745.635	1752987.412	R=1500.00' L=158.56' Δ=6°03'24" T=79.36'		13+01.54	92636.077	1753101.937
C6	13+01.54	92636.077	1753101.937	R=1500.00' L=164.87' Δ=6°17'51" T=82.52'		14+66.41	92521.918	1753220.771
L6	14+66.41	92521.918	1753220.771		S43° 00' 03"E 845.35'	23+11.76	91903.675	1753797.309



GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

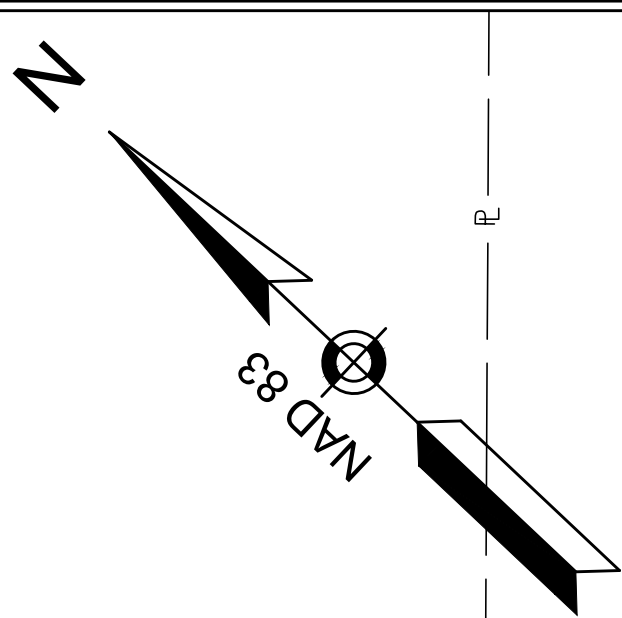
PROJECT:BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CURB TIE & GRADING PLAN

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	
				13 OF 58



CONTINUED ON
SHEET 13

BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L23	216+19.29	92536.923	1753236.860		S43° 00' 03"E 845.35'	224+64.65	91918.679	1753813.398

BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	14+66.41	92521.918	1753220.771		S43° 00' 03"E 845.35'	23+11.76	91903.675	1753797.309

RAINBOWS END CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L12	30+00.00	92140.048	1753576.881		N47° 47' 47"E 103.87'	31+03.87	92209.821	1753653.821

#22 BOULEVARDE
MAP 80 PARCEL 327
N/F
MALCOLM MACCOLL
DEED Bk:1124 Pg:155
PLAN File:04-57
LOT 8B

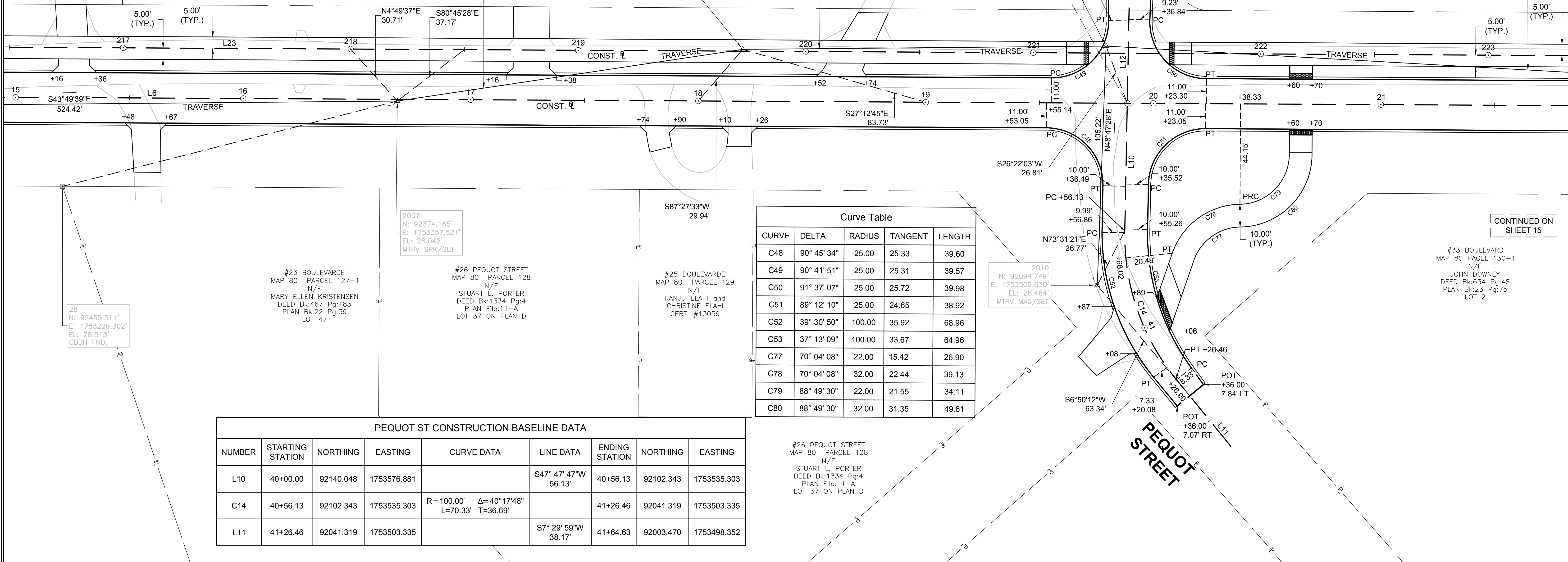
S51°49'16"E
153.51'

2008
N: 92279.277'
E: 1753478.194'
EL: 28.341'
MTRV MAG/SET

#24 BOULEVARDE
MAP 80 PARCEL 84
N/F
IRWIN FAMILY PARTNERSHIP
DEED Bk:1128 Pg:46
PLAN File:11-A
LOT 9 ON PLAN D

BOULEVARDE CONST. ± STA. 19+88.56 =
RAINBOWS END CONST. ± STA. 30+00.00 =
PEQUOT ST CONST. ± STA. 40+00.00

#1 RAINBOWS END
MAP 80 PARCEL 86
N/F
GALEN A. GARDNER
DEED Bk:1334 Pg:15
PLAN No:04-32
LOT 10A



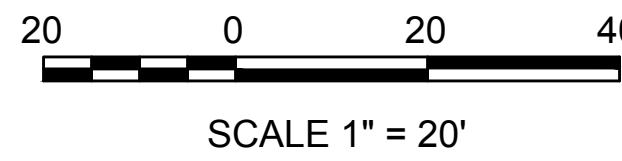
CONTINUED ON
SHEET 15

#33 BOULEVARD
MAP 80 PACEL 130-1
N/F
JOHN DOWNEY
DEED Bk:634 Pg:48
PLAN Bk:23 Pg:75
LOT 2

PEQUOT ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L10	40+00.00	92140.048	1753576.881		S47° 47' 47"W 56.13'	40+56.13	92102.343	1753535.303
C14	40+56.13	92102.343	1753535.303	R= 100.00' Δ= 40°17'48" L=70.33' T=36.69'		41+26.46	92041.319	1753503.335
L11	41+26.46	92041.319	1753503.335		S7° 29' 59"W 38.17'	41+64.63	92003.470	1753498.352

Curve Table					
CURVE	DELTA	RADIUS	TANGENT	LENGTH	
C48	90° 45' 34"	25.00	25.33	39.60	
C49	90° 41' 51"	25.00	25.31	39.57	
C50	91° 37' 07"	25.00	25.72	39.98	
C51	89° 12' 10"	25.00	24.65	38.92	
C52	39° 30' 50"	100.00	35.92	68.96	
C53	37° 13' 09"	100.00	33.67	64.96	
C77	70° 04' 08"	22.00	15.42	26.90	
C78	70° 04' 08"	32.00	22.44	39.13	
C79	88° 49' 30"	22.00	21.55	34.11	
C80	88° 49' 30"	32.00	31.35	49.61	

#26 PEQUOT STREET
MAP 80 PARCEL 128
N/F
STUART L. PORTER
DEED Bk:1334 Pg:4
PLAN File:11-A
LOT 37 ON PLAN D



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

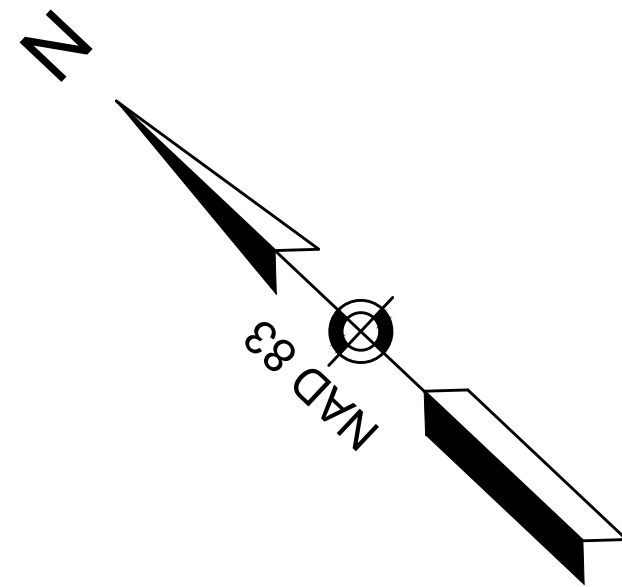
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

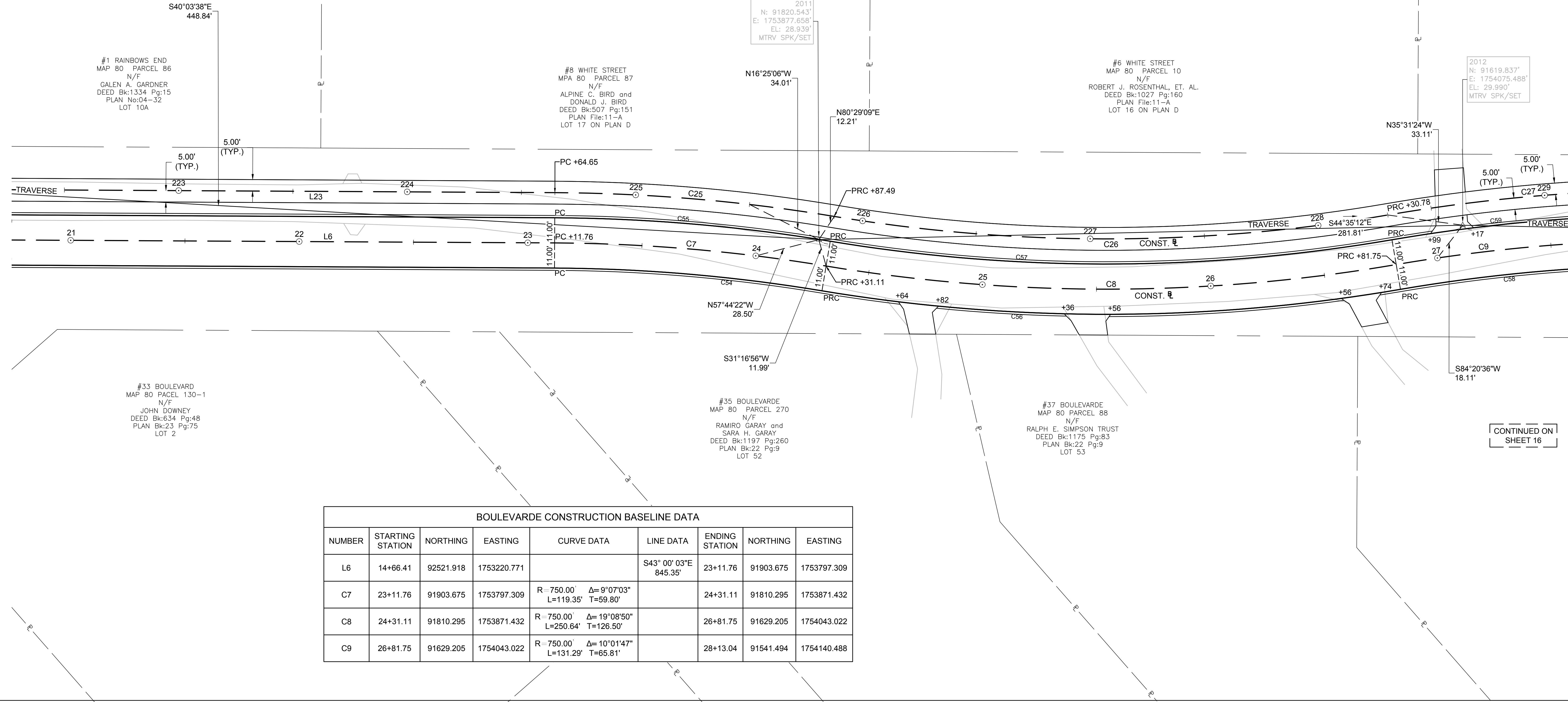
CURB TIE & GRADING PLAN

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JDB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	



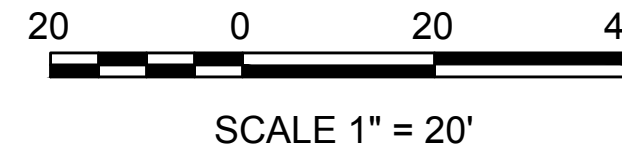
CONTINUED ON
SHEET 14



BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L23	216+19.29	92536.923	1753236.860		S43° 00' 03"E 845.35'	224+64.65	91918.679	1753813.398
C25	224+64.65	91918.679	1753813.398	R=772.00' Δ=9°07'03" L=122.85' T=61.55'		225+87.49	91822.560	1753889.696
C26	225+87.49	91822.560	1753889.696	R=728.00' Δ=19°08'50" L=243.29' T=122.79'		228+30.78	91646.782	1754056.252
C27	228+30.78	91646.782	1754056.252	R=772.00' Δ=10°01'47" L=135.14' T=67.74'		229+65.92	91556.498	1754156.578

Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C54	9° 07' 03"	739.00	58.92	117.60
C55	9° 07' 03"	761.00	60.68	121.10
C56	19° 08' 50"	761.00	128.35	254.31
C57	19° 08' 50"	739.00	124.64	246.96
C58	10° 01' 47"	739.00	64.85	129.36
C59	10° 01' 47"	761.00	66.78	133.21

BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L6	14+66.41	92521.918	1753220.771		S43° 00' 03"E 845.35'	23+11.76	91903.675	1753797.309
C7	23+11.76	91903.675	1753797.309	R=750.00' Δ=9°07'03" L=119.35' T=59.80'		24+31.11	91810.295	1753871.432
C8	24+31.11	91810.295	1753871.432	R=750.00' Δ=19°08'50" L=250.64' T=126.50'		26+81.75	91629.205	1754043.022
C9	26+81.75	91629.205	1754043.022	R=750.00' Δ=10°01'47" L=131.29' T=65.81'		28+13.04	91541.494	1754140.488



GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

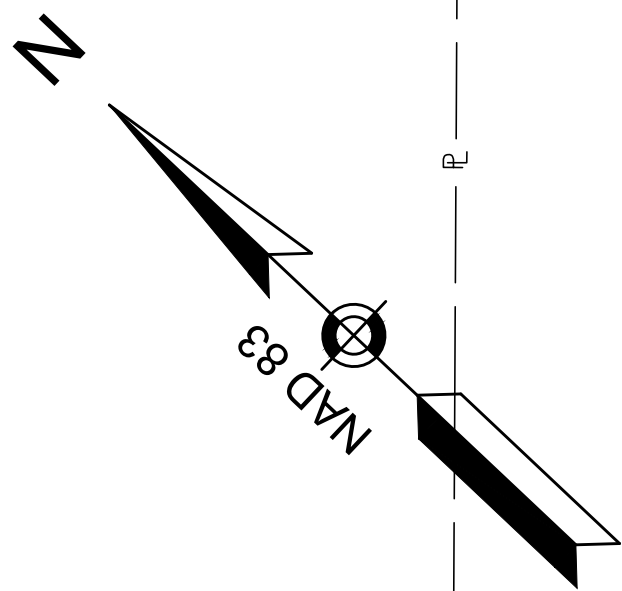
PREPARED FOR:

TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CURB TIE & GRADING PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	
				15 OF 58



CONTINUED ON
SHEET 15

BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C27	228+30.78	91646.782	1754056.252	R = 772.00' Δ= 10°01'47" L=135.14' T=67.74'		229+65.92	91556.498	1754156.578
L24	229+65.92	91556.498	1754156.578		S43° 00' 03"E 212.17'	231+78.09	91401.331	1754301.277
C28	231+78.09	91401.331	1754301.277	R = 1122.00' Δ= 8°00'27" L=156.80' T=78.53'		233+34.89	91279.565	1754399.871
C29	233+34.89	91279.565	1754399.871	R = 1078.00' Δ= 7°18'56" L=137.64' T=68.91'		234+72.53	91172.145	1754485.781

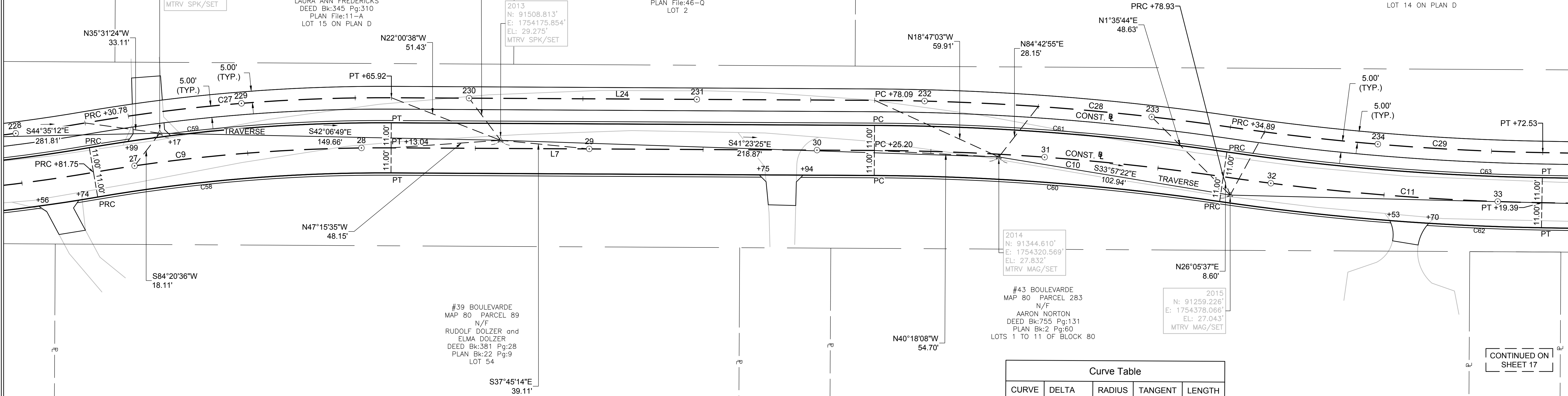
2012
N: 91619.837'
E: 1754075.488'
EL: 29.990'
MTRV SPK/SET

#4 WHITE STREET
MAP 80 PARCEL 215
N/F
DAVID FREDERICKS and
LAURA ANN FREDERICKS
DEED Bk:345 Pg:310
PLAN File:11-A
LOT 15 ON PLAN D

2013
N: 91508.813'
E: 1754175.854'
EL: 29.275'
MTRV SPK/SET

#61 LOVERS LANE
MAP 80 PARCEL 215-1
N/F
KAREN BOPP and
DAVID BOPP
DEED Bk:1291 Pg:304
PLAN File:46-Q
LOT 2

#63 LOVERS LANE
AKA #44 BOULEVARDE
MAP 80 PARCEL 214
N/F
TIMOTHY R. REINEMO
DEED Bk:887 Pg:28
PLAN File:11-A
LOT 14 ON PLAN D



BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C9	26+81.75	91629.205	1754043.022	R = 750.00' Δ= 10°01'47" L=131.29' T=65.81'		28+13.04	91541.494	1754140.488
L7	28+13.04	91541.494	1754140.488		S43° 00' 03"E 212.17'	30+25.20	91386.327	1754285.188
C10	30+25.20	91386.327	1754285.188	R = 1100.00' Δ= 8°00'27" L=153.73' T=76.99'		31+78.93	91266.948	1754381.848
C11	31+78.93	91266.948	1754381.848	R = 1100.00' Δ= 7°18'56" L=140.45' T=70.32'		33+19.39	91157.336	1754469.511

Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C58	10° 01' 47"	739.00	64.85	129.36
C59	10° 01' 47"	761.00	66.78	133.21
C60	8° 00' 27"	1089.00	76.22	152.19
C61	8° 00' 27"	1111.00	77.76	155.27
C62	7° 18' 56"	1111.00	71.02	141.86
C63	7° 18' 56"	1089.00	69.62	139.05

20 0 20 40
SCALE 1" = 20'

GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

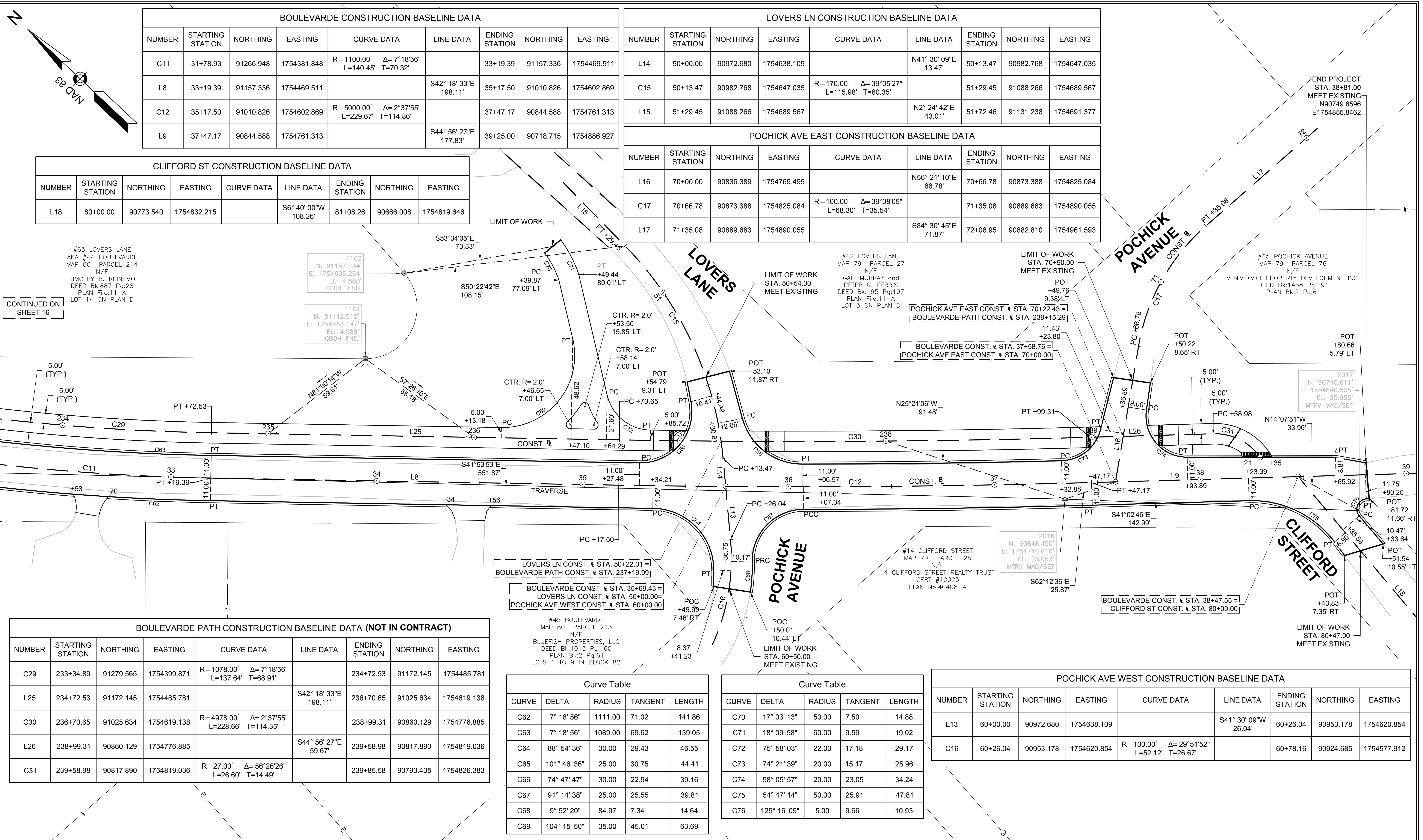
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CURB TIE & GRADING PLAN

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	
				16 OF 58

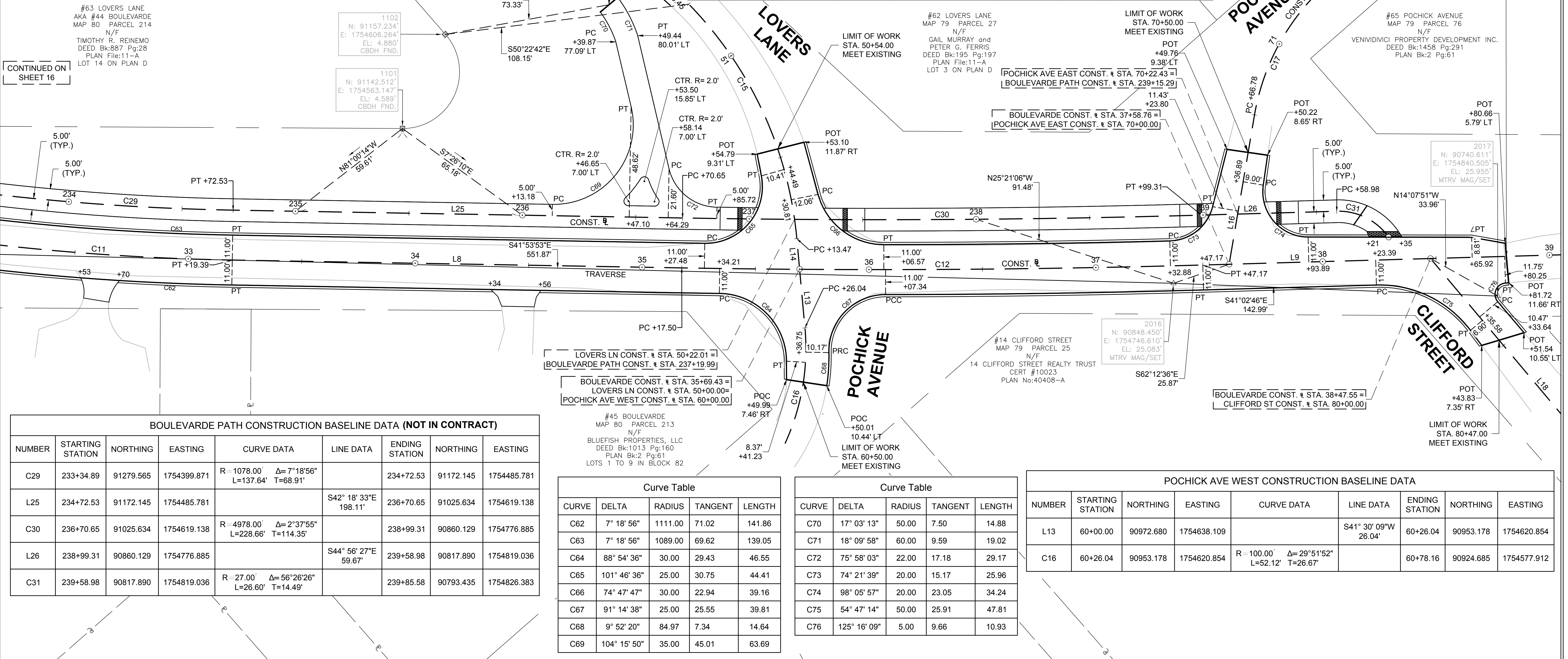


BOULEVARDE CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C11	31+78.93	91266.948	1754381.848	R=1100.00' Δ=7°18'56" L=140.45' T=70.32'		33+19.39	91157.336	1754469.511
L8	33+19.39	91157.336	1754469.511		S42° 18' 33"E 198.11'	35+17.50	91010.826	1754602.869
C12	35+17.50	91010.826	1754602.869	R=5000.00' Δ=2°37'55" L=229.67' T=114.86'		37+47.17	90844.588	1754761.313
L9	37+47.17	90844.588	1754761.313		S44° 56' 27"E 177.83'	39+25.00	90718.715	1754886.927

LOVERS LN CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L14	50+00.00	90972.680	1754638.109		N41° 30' 09"E 13.47'	50+13.47	90982.768	1754647.035
C15	50+13.47	90982.768	1754647.035	R=170.00' Δ=39°05'27" L=115.98' T=60.35'		51+29.45	91088.266	1754689.567
L15	51+29.45	91088.266	1754689.567		N2° 24' 42"E 43.01'	51+72.46	91131.238	1754691.377

POCHICK AVE EAST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L16	70+00.00	90836.389	1754769.495		N56° 21' 10"E 66.78'	70+66.78	90873.388	1754825.084
C17	70+66.78	90873.388	1754825.084	R=100.00' Δ=39°08'05" L=68.30' T=35.54'		71+35.08	90889.683	1754890.055
L17	71+35.08	90889.683	1754890.055		S84° 30' 45"E 71.87'	72+06.95	90882.810	1754961.593

CLIFFORD ST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L18	80+00.00	90773.540	1754832.215		S6° 40' 00"W 108.26'	81+08.26	90666.008	1754819.646



BOULEVARDE PATH CONSTRUCTION BASELINE DATA (NOT IN CONTRACT)								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C29	233+34.89	91279.565	1754399.871	R=1078.00' Δ=7°18'56" L=137.64' T=68.91'		234+72.53	91172.145	1754485.781
L25	234+72.53	91172.145	1754485.781		S42° 18' 33"E 198.11'	236+70.65	91025.634	1754619.138
C30	236+70.65	91025.634	1754619.138	R=4978.00' Δ=2°37'55" L=228.66' T=114.35'		238+99.31	90860.129	1754776.885
L26	238+99.31	90860.129	1754776.885		S44° 56' 27"E 59.67'	239+58.98	90817.890	1754819.036
C31	239+58.98	90817.890	1754819.036	R=27.00' Δ=56°26'26" L=26.60' T=14.49'		239+85.58	90793.435	1754826.383

Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C62	7° 18' 56"	1111.00	71.02	141.86
C63	7° 18' 56"	1089.00	69.62	139.05
C64	88° 54' 36"	30.00	29.43	46.55
C65	101° 46' 36"	25.00	30.75	44.41
C66	74° 47' 47"	30.00	22.94	39.16
C67	91° 14' 38"	25.00	25.55	39.81
C68	9° 52' 20"	84.97	7.34	14.64
C69	104° 15' 50"	35.00	45.01	63.69

Curve Table				
CURVE	DELTA	RADIUS	TANGENT	LENGTH
C70	17° 03' 13"	50.00	7.50	14.88
C71	18° 09' 58"	60.00	9.59	19.02
C72	75° 58' 03"	22.00	17.18	29.17
C73	74° 21' 39"	20.00	15.17	25.96
C74	98° 05' 57"	20.00	23.05	34.24
C75	54° 47' 14"	50.00	25.91	47.81
C76	125° 16' 09"	5.00	9.66	10.93

POCHICK AVE WEST CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L13	60+00.00	90972.680	1754638.109		S41° 30' 09"W 26.04'	60+26.04	90953.178	1754620.854
C16	60+26.04	90953.178	1754620.854	R=100.00' Δ=29°51'52" L=52.12' T=26.67'		60+78.16	90924.685	1754577.912

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

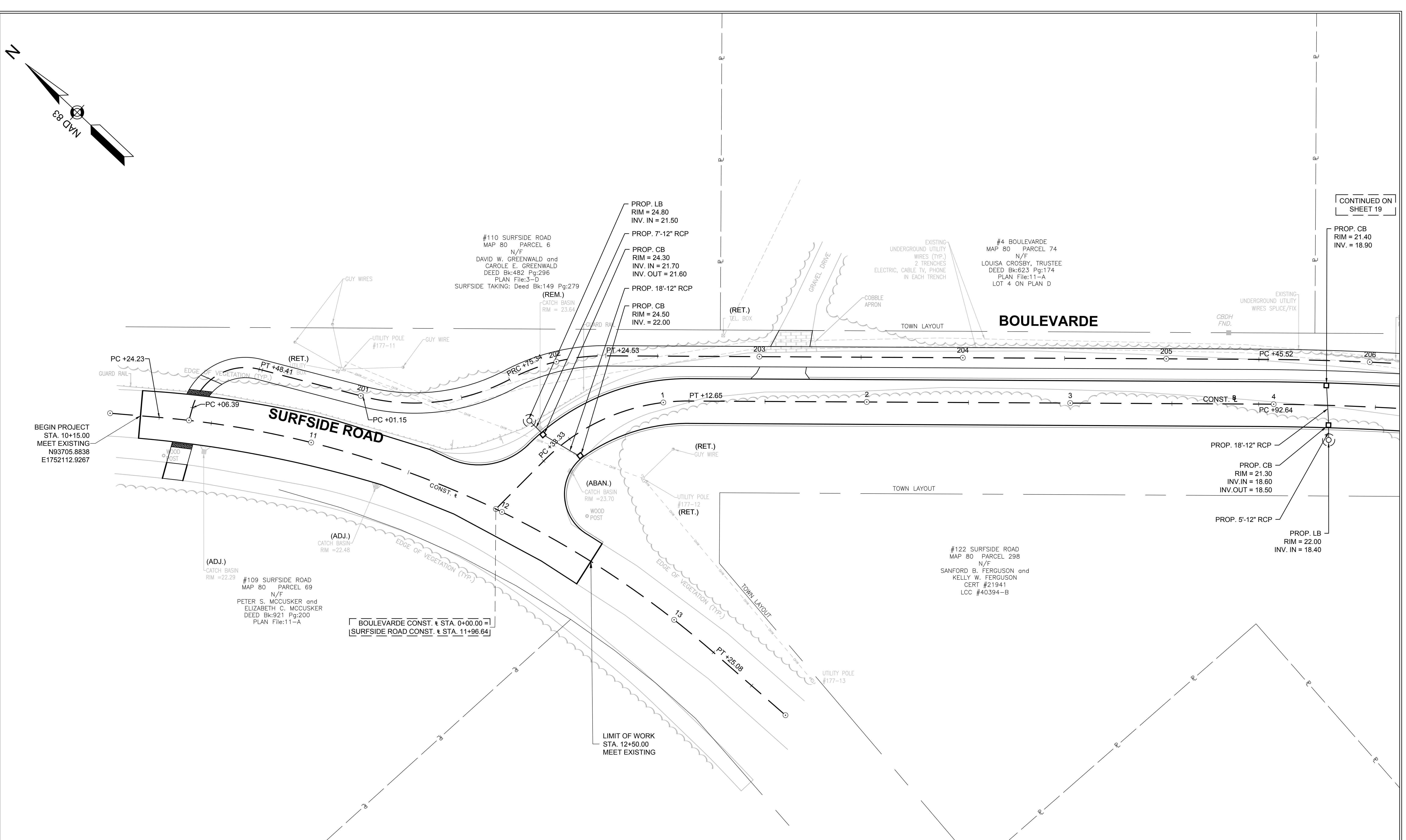
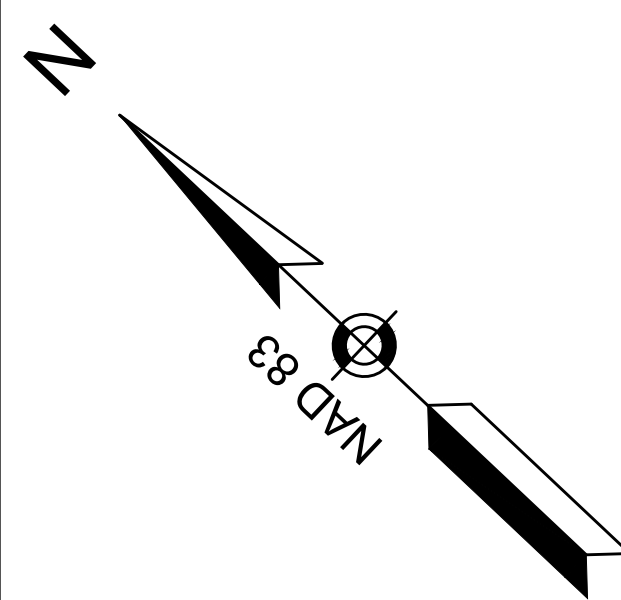
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

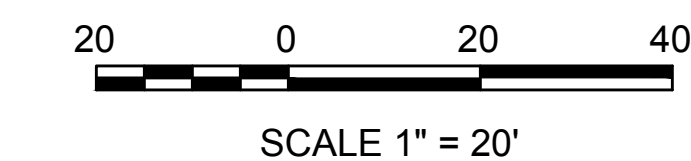
CURB TIE & GRADING PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	CT
			DRAWING NO.:	
				17 OF 58



CONTINUED ON
SHEET 19



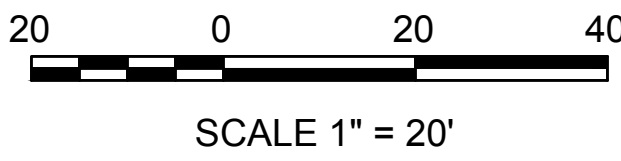
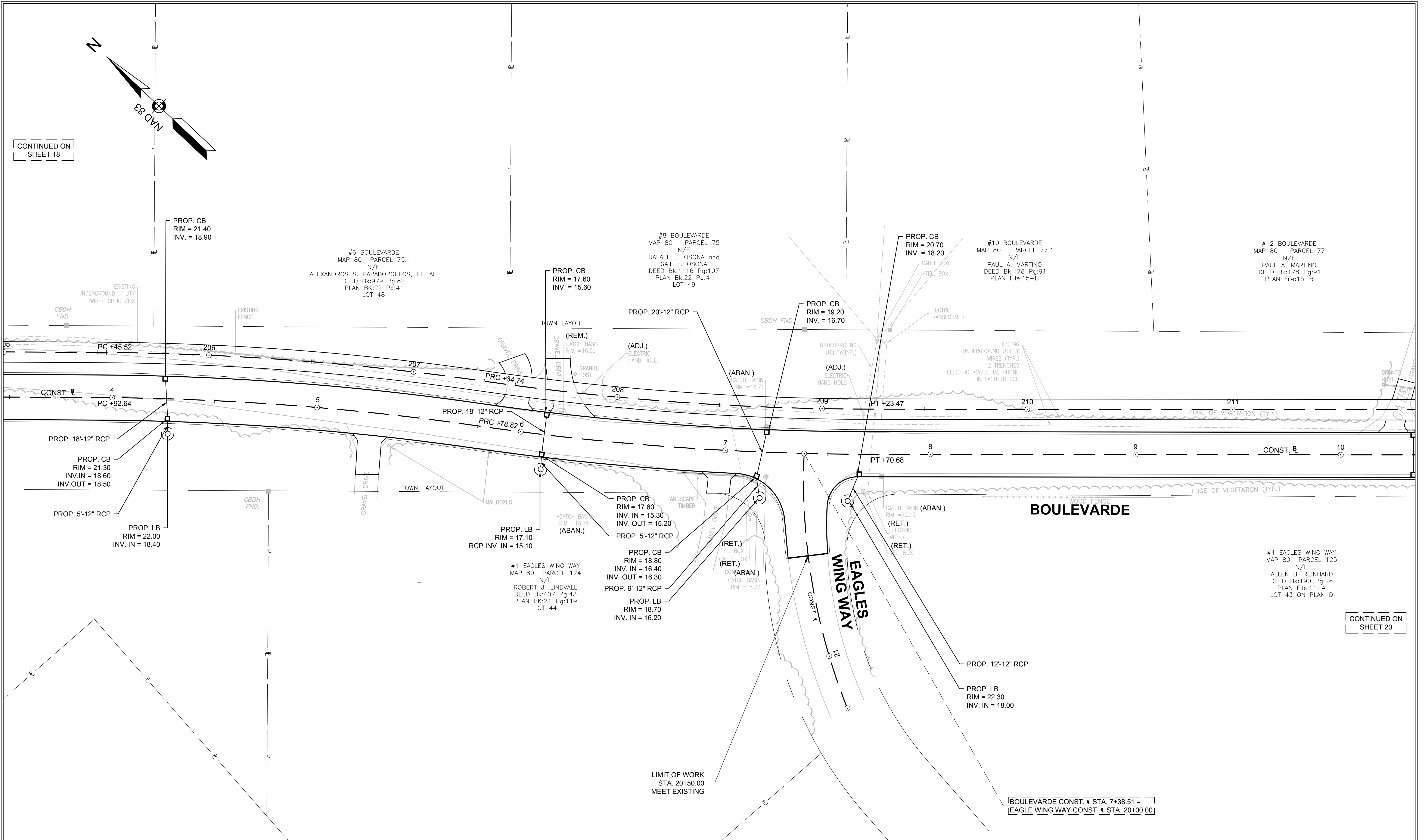
GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA

DRainage & UTILITY PLAN

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	LAB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	DU
			DRAWING NO.:	
				18 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

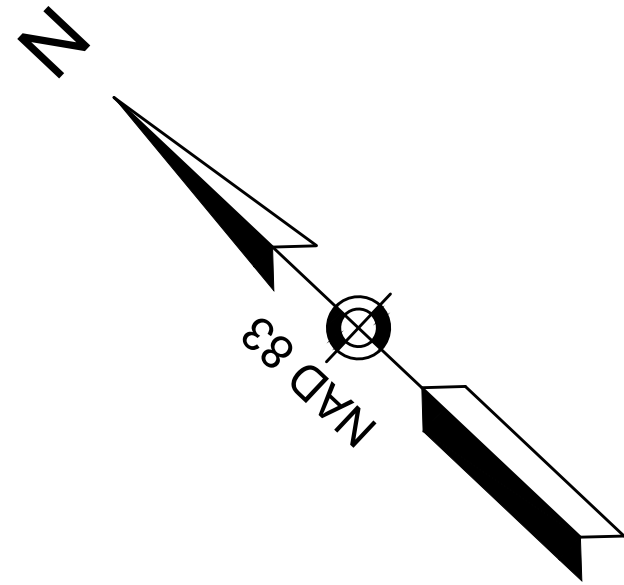
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

DRAINAGE & UTILITY PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	LAB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	DU
			DRAWING NO.:	
				19 OF 58



CONTINUED ON
SHEET 21

#1 RAINBOWS END
MAP 80 PARCEL 86
N/F
GALEN A. GARDNER
DEED Bk:1334 Pg:15
PLAN No:04-32
LOT 10A

PROP. CB
RIM = 28.10
INV. = 25.60

(ABAN.)
CATCH BASIN
RIM = 27.75

#8 WHITE STREET
MPA 80 PARCEL 87
N/F
ALPINE C. BIRD and
DONALD J. BIRD
DEED Bk:507 Pg:151
PLAN File:11-A
LOT 17 ON PLAN D

(RET.)
ELECTRIC
TRANSFORMER

(RET.)
TEL. BOX
CABLE
BOX
(RET.)

PROP. CB
RIM = 29.50
INV. = 27.00

#6 WHITE STREET
MAP 80 PARCEL 10
N/F
ROBERT J. ROSENTHAL, ET. AL.
DEED Bk:1027 Pg:160
PLAN File:11-A
LOT 16 ON PLAN D

PROP. 18'-12" RCP

EXISTING
UNDERGROUND UTILITY
WIRES (TYP.)
2 TRENCHES
ELECTRIC, CABLE TV, PHONE
IN EACH TRENCH

GRAVEL DRIVE

WOOD
POST

GRAVEL DRIVE

BOULDER

(RET.)
EX. WELL

(RET.)
CABLE BOX
(RET.)
ELECTRIC
HAND HOLES

GRANITE
POST

GRAVEL DRIVE

GRAVEL DRIVE

HAND HOLE STUB
(RET.)

UNDERGROUND
CABLE & TEL.
TEL. BOX
(RET.)

#35 BOULEVARDE
MAP 80 PARCEL 270
N/F
RAMIRO GARAY and
SARA H. GARAY
DEED Bk:1197 Pg:260
PLAN Bk:22 Pg:9
LOT 52

#37 BOULEVARDE
MAP 80 PARCEL 88
N/F
RALPH E. SIMPSON TRUST
DEED Bk:1175 Pg:83
PLAN Bk:22 Pg:9
LOT 53

PROP. LB
RIM = 29.60
INV. IN = 26.30

PROP. 18'-12" RCP

PROP. CB
RIM = 29.50
INV. IN = 26.70
INV. OUT = 26.60

PROP. LB
RIM = 28.60
INV. IN = 25.10

(ABAN.)
CATCH BASIN
RIM = 27.46

PROP. CB
RIM = 28.10
INV. IN = 25.30
INV. OUT = 25.20

PROP. 18'-12" RCP

PROP. 6'-12" RCP

LOW POINT

+38.89

PC +64.65

PC +11.76

EDGE OF VEGETATION (TYP.)

BOULEVARDE

EDGE OF VEGETATION (TYP.)

CABLE BOX
(RET.)

TOWN LAYOUT

CONST. 8

CONST. 8

229

228

227

226

225

224

223

222

221

220

219

218

217

216

215

214

213

212

211

210

209

208

207

206

205

204

203

202

201

200

199

198

20 0 20 40
SCALE 1" = 20'

GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

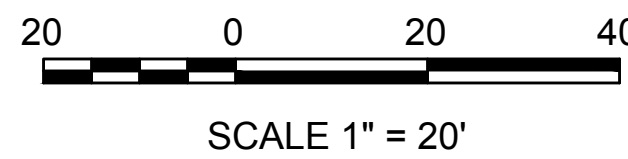
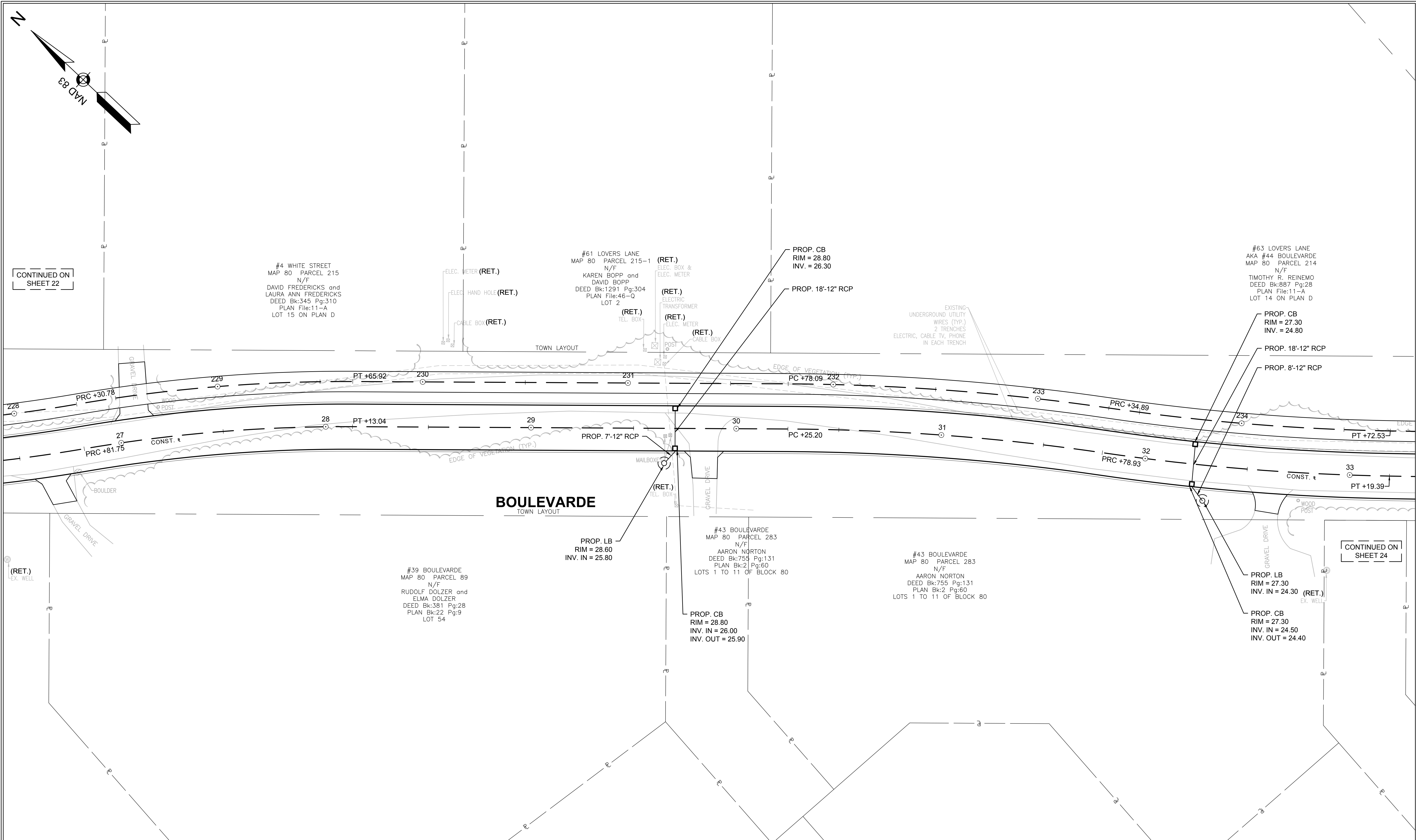
PROJECT:
BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

DRAINAGE & UTILITY PLAN

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	LAB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	DU
			DRAWING NO.:	22 OF 58



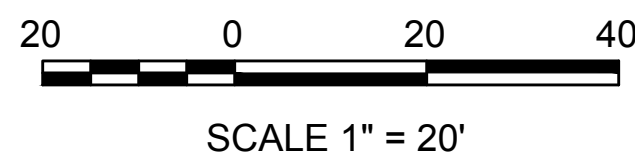
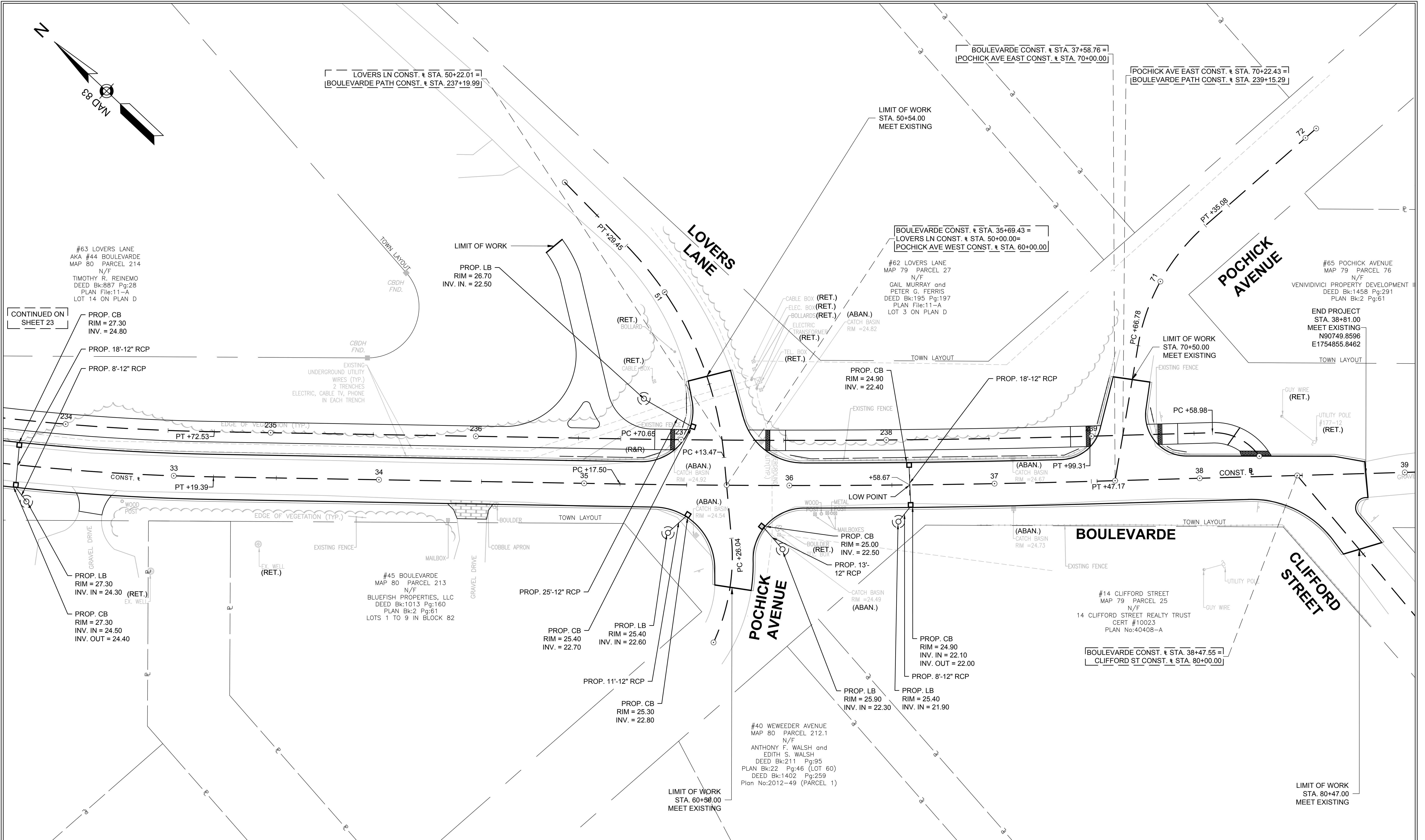
GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA

DRAINAGE & UTILITY PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	LAB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	DU
			DRAWING NO.:	
				23 OF 58



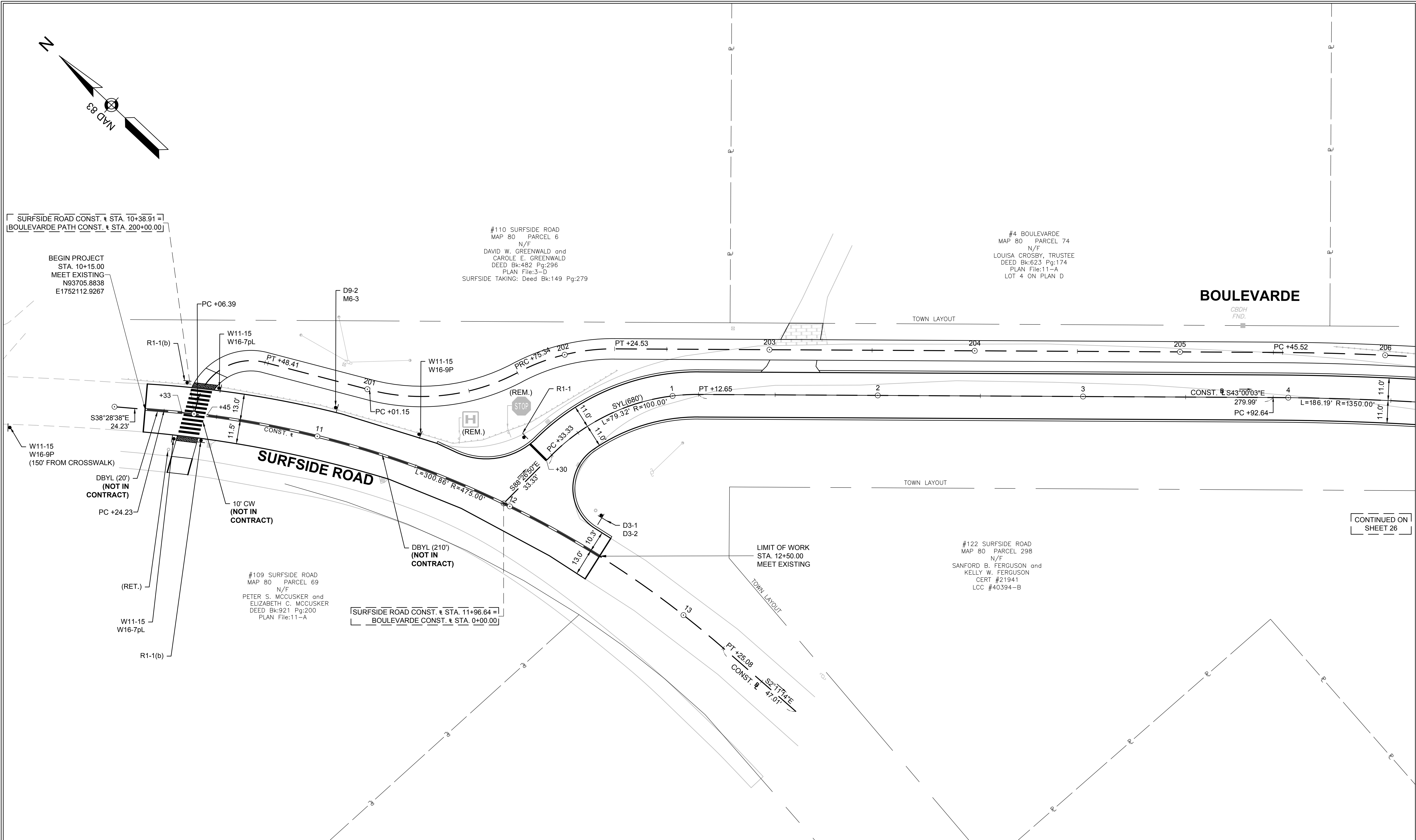
GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:	BOULEVARDE RECONSTRUCTION NANTUCKET, MASSACHUSETTS
PREPARED FOR:	TOWN OF NANTUCKET 16 BROAD STREET NANTUCKET, MA

DRAINAGE & UTILITY PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY:	LAB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	DU
			DRAWING NO.:	
				24 OF 58



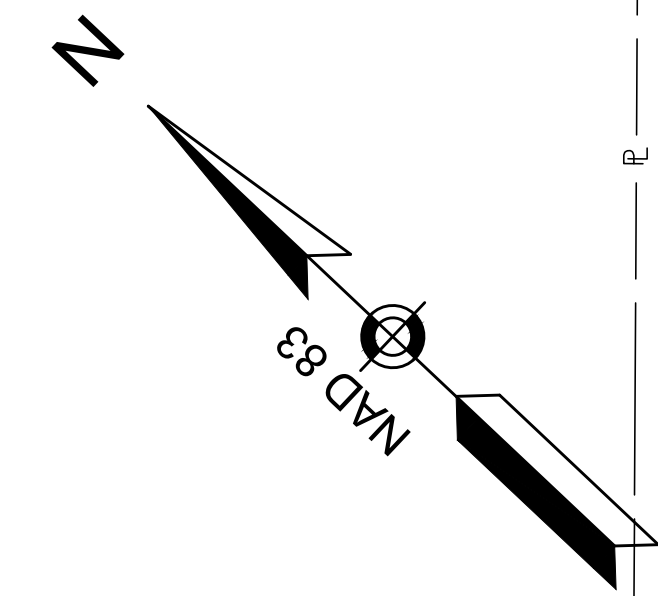
20 0 20 40
SCALE 1" = 20'

GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS
PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				25 OF 58



CONTINUED ON
SHEET 25

BOULEVARDE

CBDH
FND.

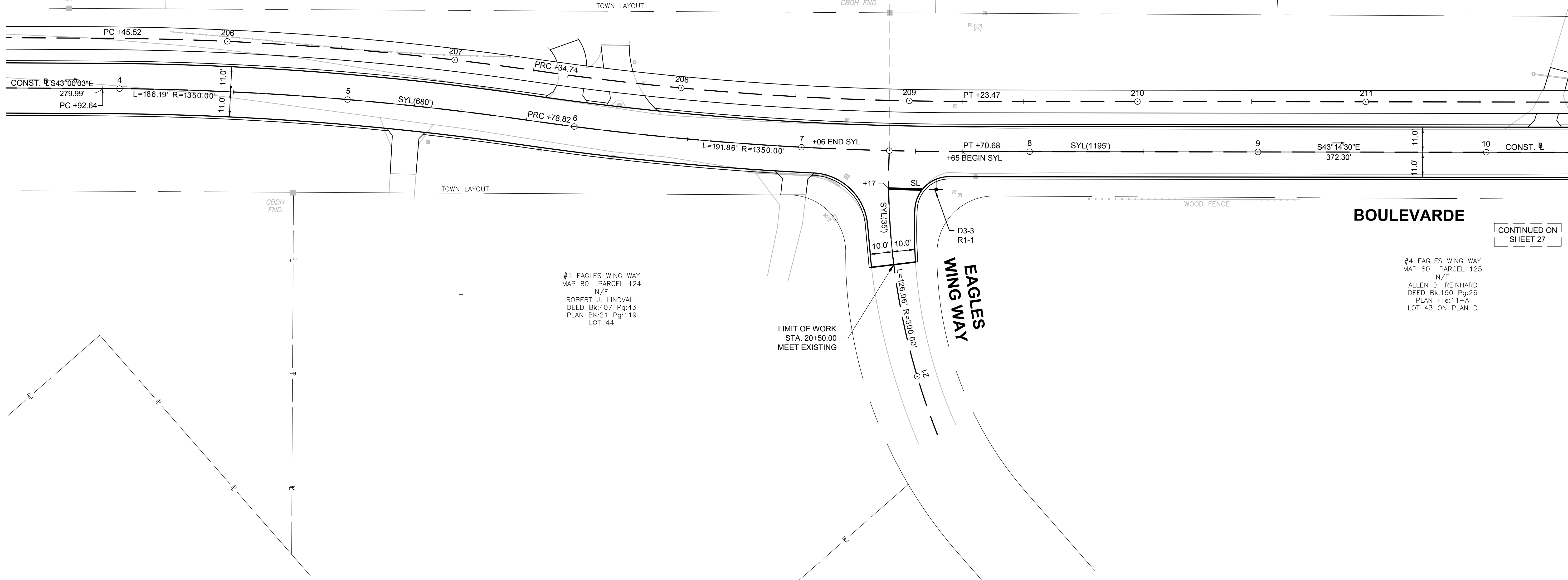
#6 BOULEVARDE
MAP 80 PARCEL 75.1
N/F
ALEXANDROS S. PAPADOPOULOS, ET. AL.
DEED Bk:979 Pg:82
PLAN Bk:22 Pg:41
LOT 48

#8 BOULEVARDE
MAP 80 PARCEL 75
N/F
RAFAEL E. OSONA and
GAIL E. OSONA
DEED Bk:1116 Pg:107
PLAN Bk:22 Pg:41
LOT 49

BOULEVARDE CONST. @ STA. 7+38.51 =
EAGLE WING WAY CONST. @ STA. 20+00.00

#10 BOULEVARDE
MAP 80 PARCEL 77.1
N/F
PAUL A. MARTINO
DEED Bk:178 Pg:91
PLAN File:15-B

#12 BOULEVARDE
MAP 80 PARCEL 77
N/F
PAUL A. MARTINO
DEED Bk:178 Pg:91
PLAN File:15-B



BOULEVARDE

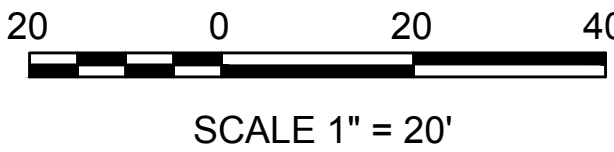
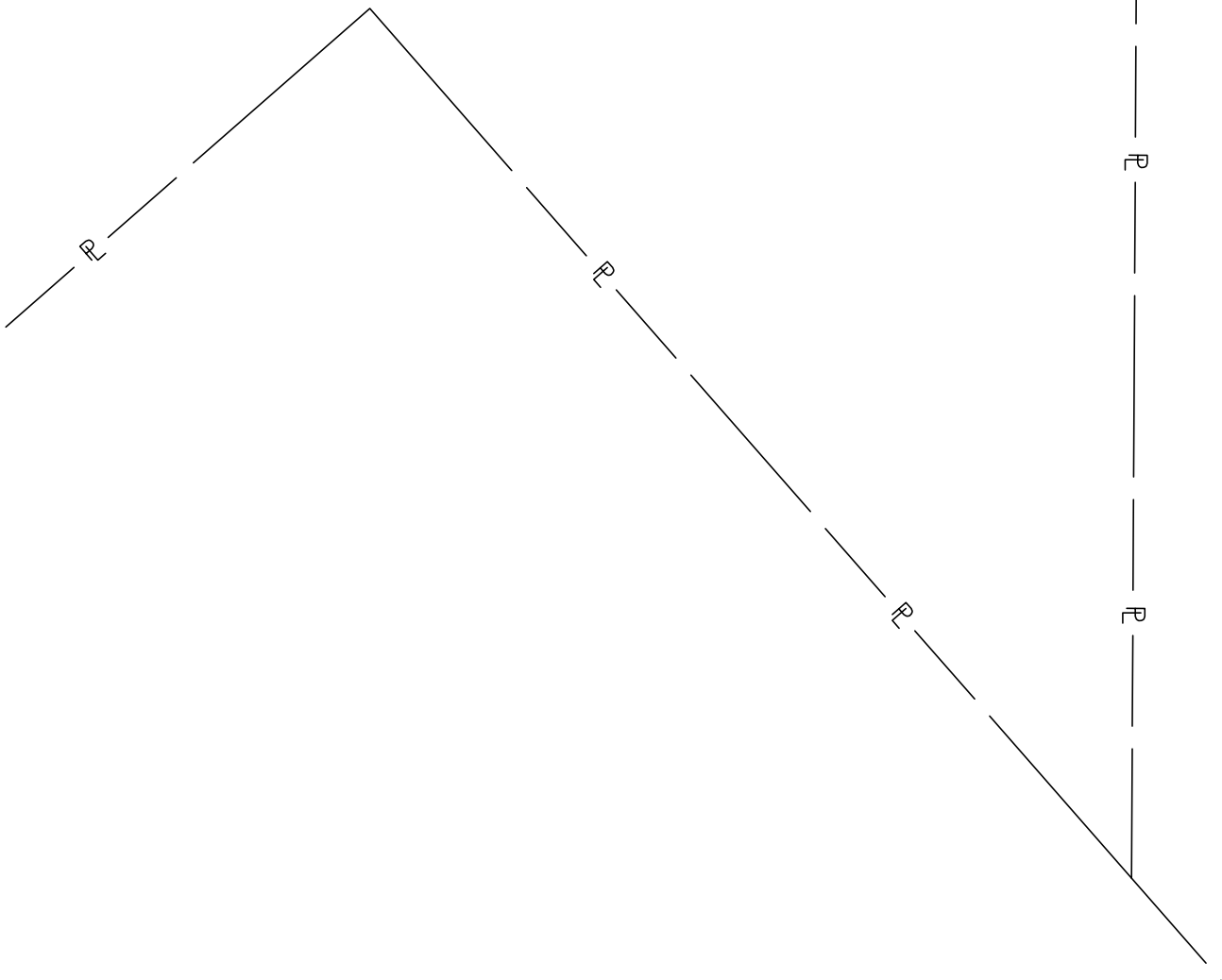
CONTINUED ON
SHEET 27

#4 EAGLES WING WAY
MAP 80 PARCEL 125
N/F
ALLEN B. REINHARD
DEED Bk:190 Pg:26
PLAN File:11-A
LOT 43 ON PLAN D

#1 EAGLES WING WAY
MAP 80 PARCEL 124
N/F
ROBERT J. LINDVALL
DEED Bk:407 Pg:43
PLAN Bk:21 Pg:119
LOT 44

LIMIT OF WORK
STA. 20+50.00
MEET EXISTING

EAGLES
WING WAY



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

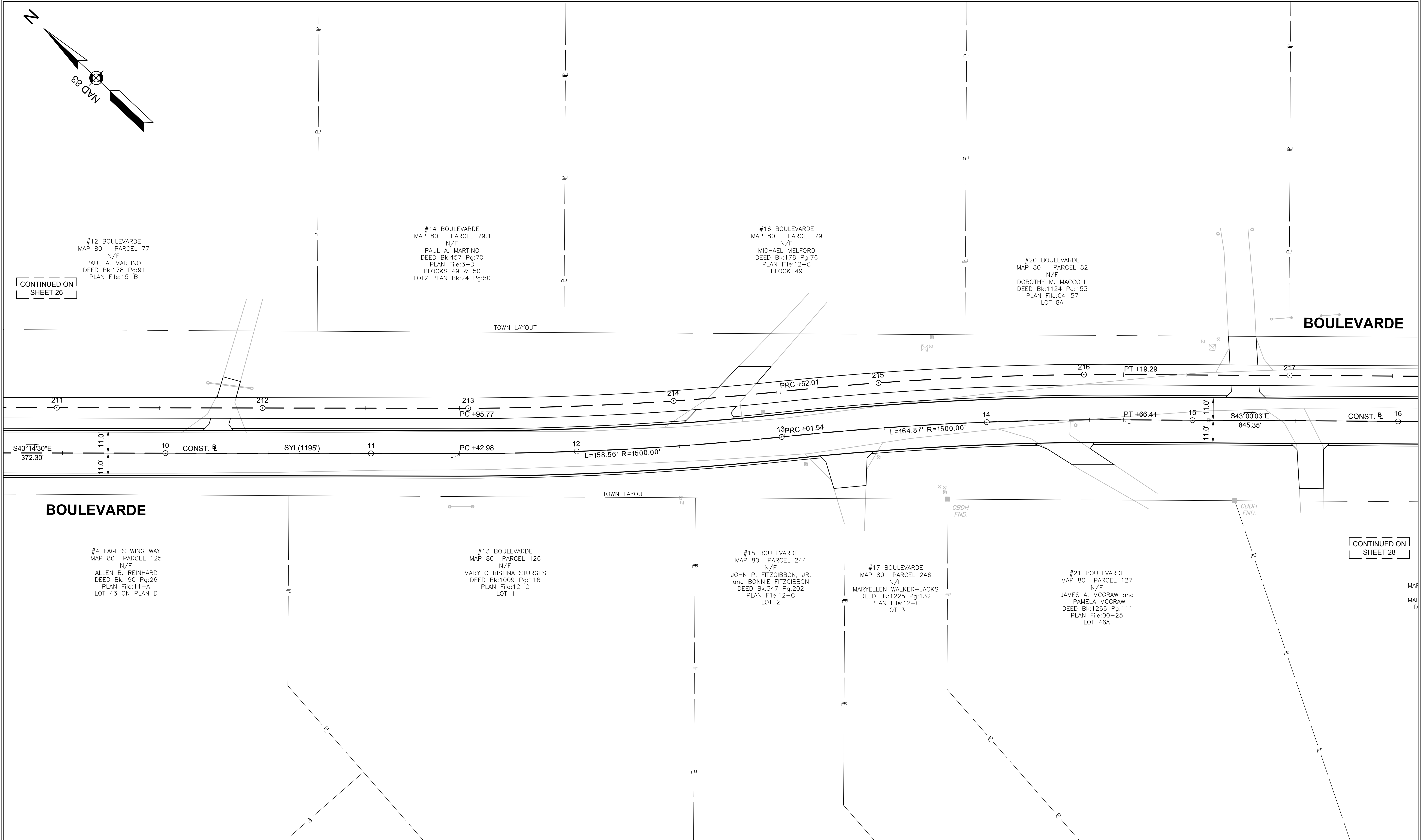
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN

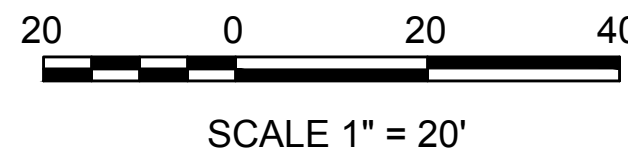
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				26 OF 58



CONTINUED ON
SHEET 26

CONTINUED ON
SHEET 28

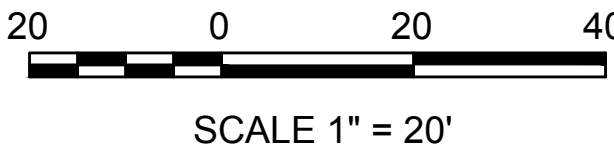
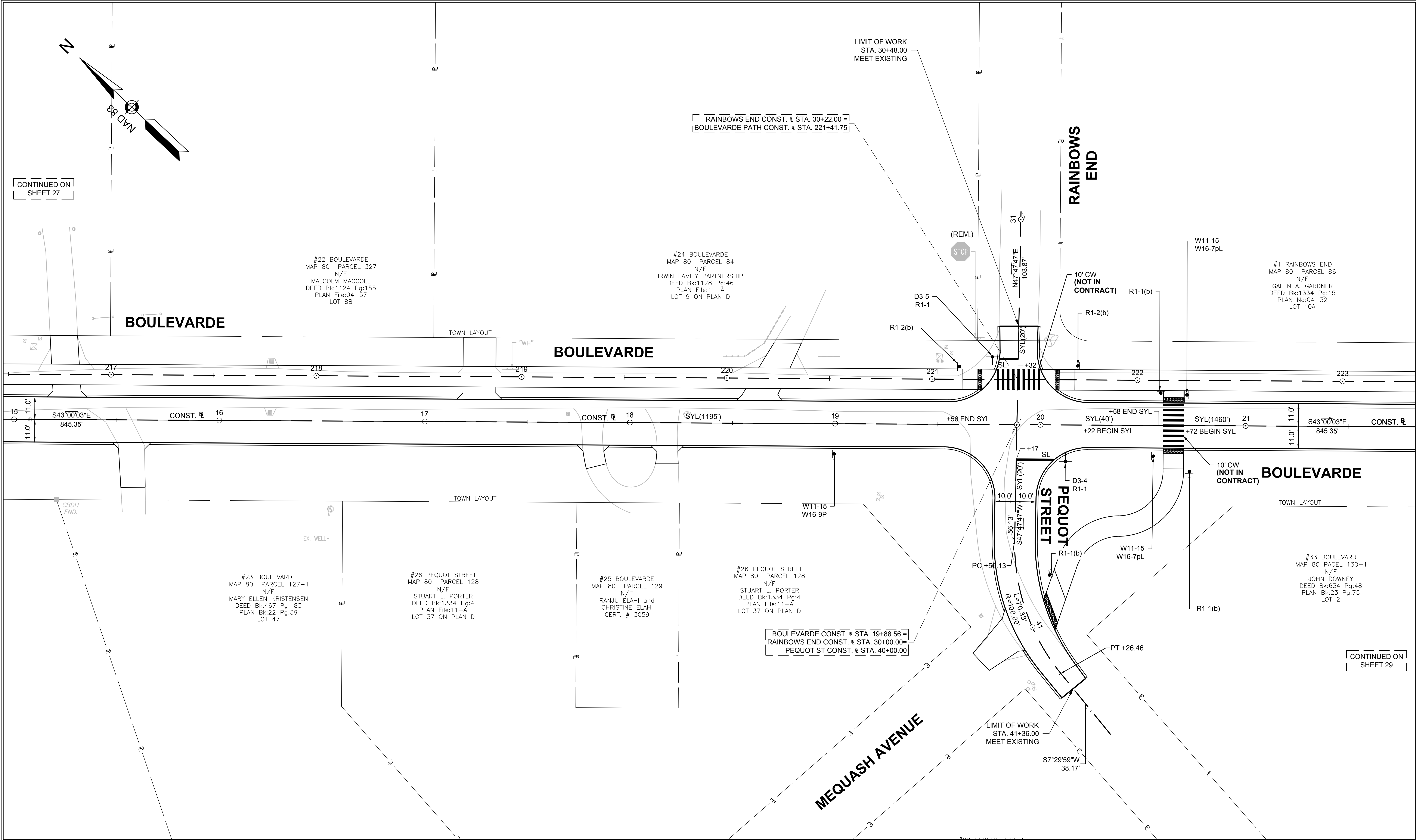


GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS
PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				27 OF 58

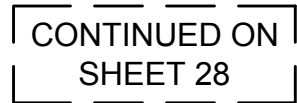


GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS
PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JDB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				28 OF 58



W11-15
W16-7pL

#1 RAINBOWS END
MAP 80 PARCEL 86
N/F
GALEN A. GARDNER
DEED Bk:1334 Pg:15
PLAN No:04-32
LOT 10A

#8 WHITE STREET
MPA 80 PARCEL 87
N/F
ALPINE C. BIRD and
DONALD J. BIRD
DEED Bk:507 Pg:151
PLAN File:11-A
LOT 17 ON PLAN D

#6 WHITE STREET
MAP 80 PARCEL 10
N/F
ROBERT J. ROSENTHAL, ET. AL.
DEED Bk:1027 Pg:160
PLAN File:11-A
LOT 16 ON PLAN D

BOULEVARDE

TOWN LAYOUT

W11-15
W16-9P

SYL(1460') 21

S43°00'03"E 845.35'

11.0'

11.0'

— 10' CW
(NOT IN
CONTRACT)

TOWN LAYOUT

#33 BOULEVARD
MAP 80 PACEL 130-1
N/F
JOHN DOWNEY
DEED Bk:634 Pg:48
PLAN Bk:23 Pg:75
LOT 2

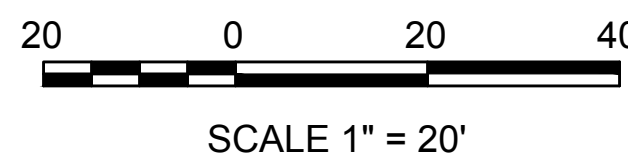
#35 BOULEVARDE
MAP 80 PARCEL 270
N/F
RAMIRO GARAY and
SARA H. GARAY
DEED Bk:1197 Pg:260
PLAN Bk:22 Pg:9
LOT 52

#37 BOULEVARDE
MAP 80 PARCEL 88
N/F
RALPH E. SIMPSON TRUST
DEED Bk:1175 Pg:83
PLAN Bk:22 Pg:9
LOT 53



EX. WELL

CONTINUED ON
SHEET 30



Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

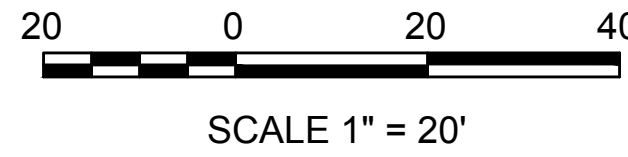
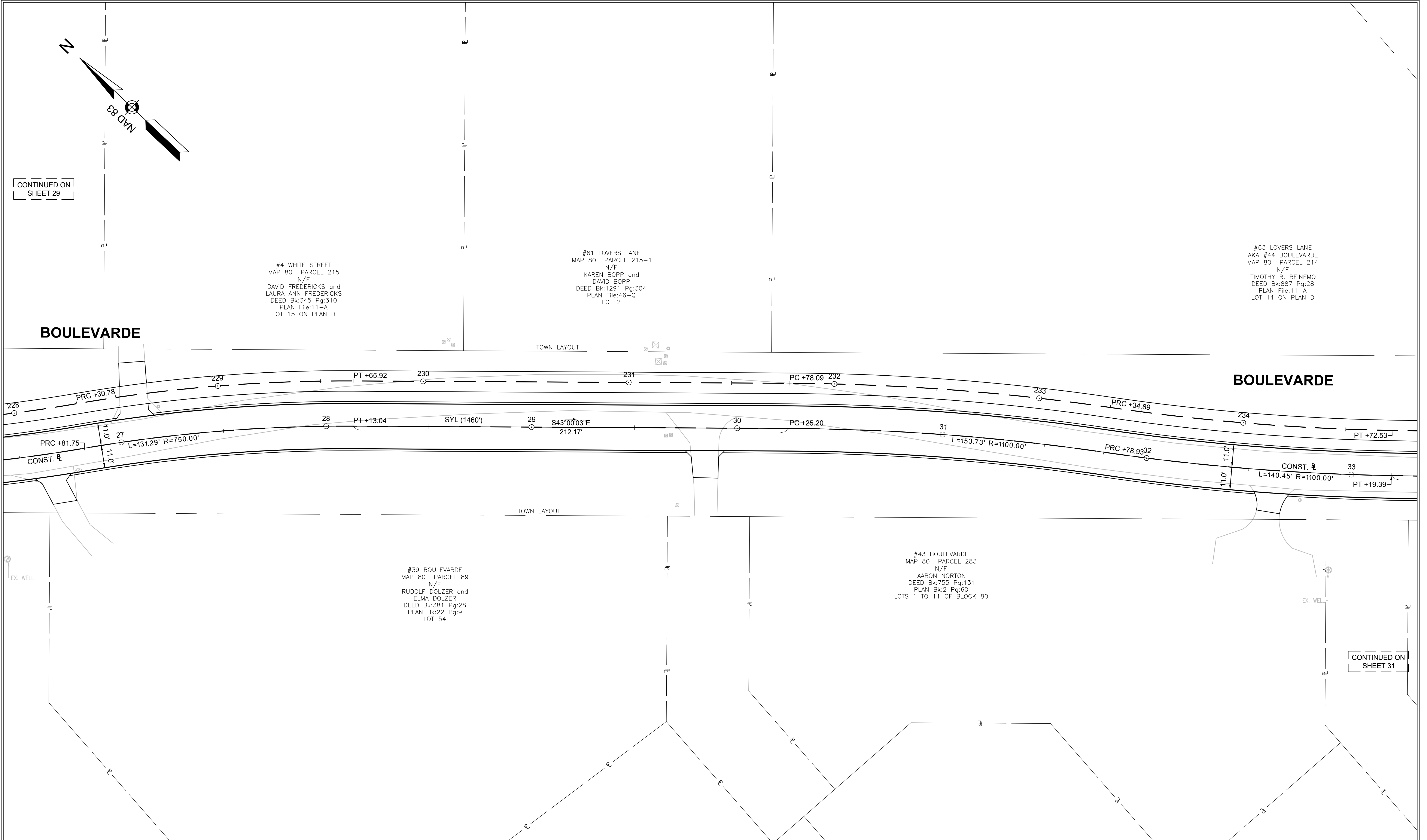
PREPARED FOR:

TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN

**BOULEVARDE
NANTUCKET**

NO.	REVISION	DATE	DESIGN/DRAWN BY: JDE
			CHECK BY: JFO
			DATE: 5/04/2016
			SCALE: AS NOTED
			JOB NO.:
			FILE NAME: PM&S
			DRAWING NO.:
			29 OF 58

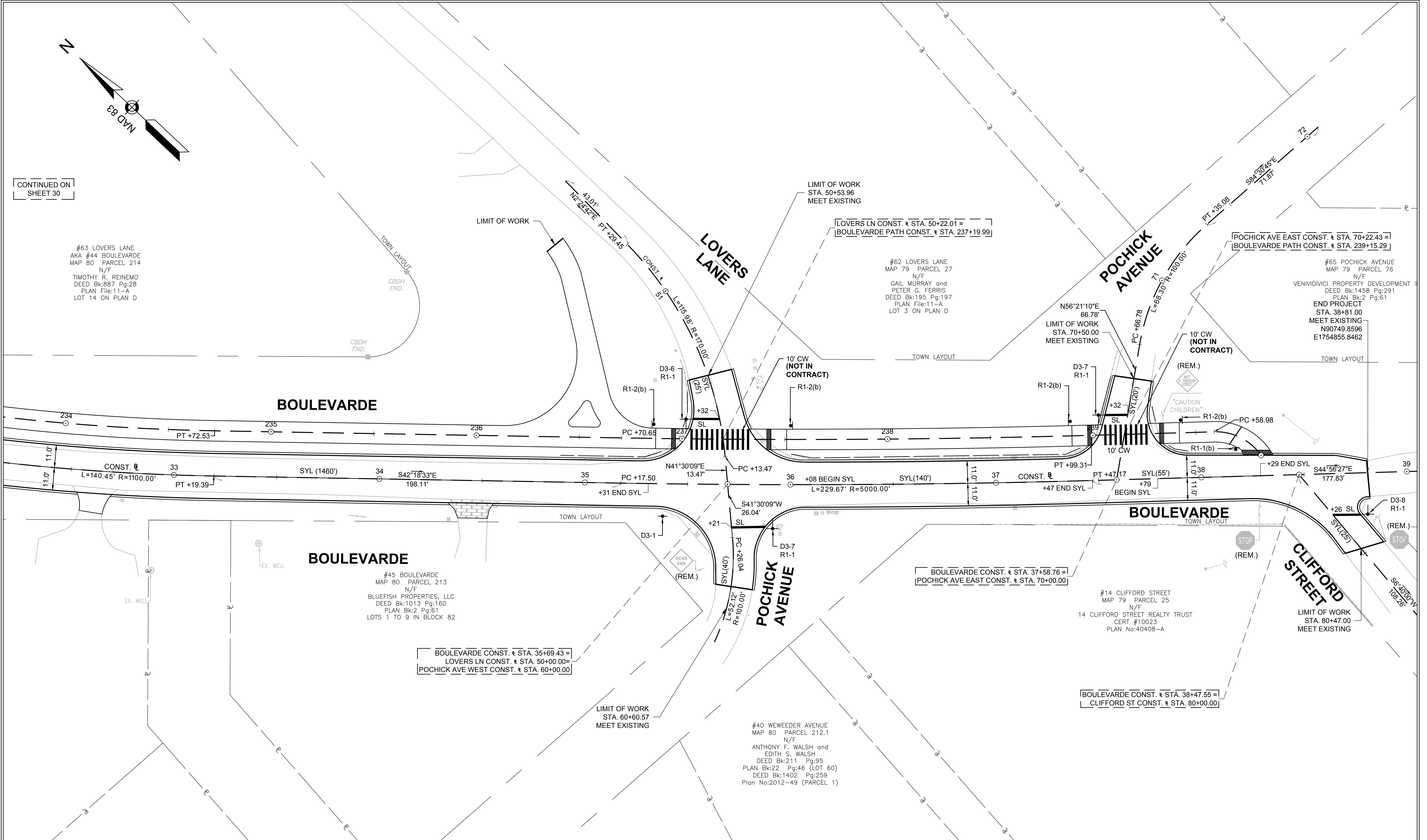


GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS
PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				30 OF 58



20 0 20 40
SCALE 1" = 20'

GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS



PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

PAVEMENT MARKING & SIGNING PLAN

BOULEVARDE NANTUCKET

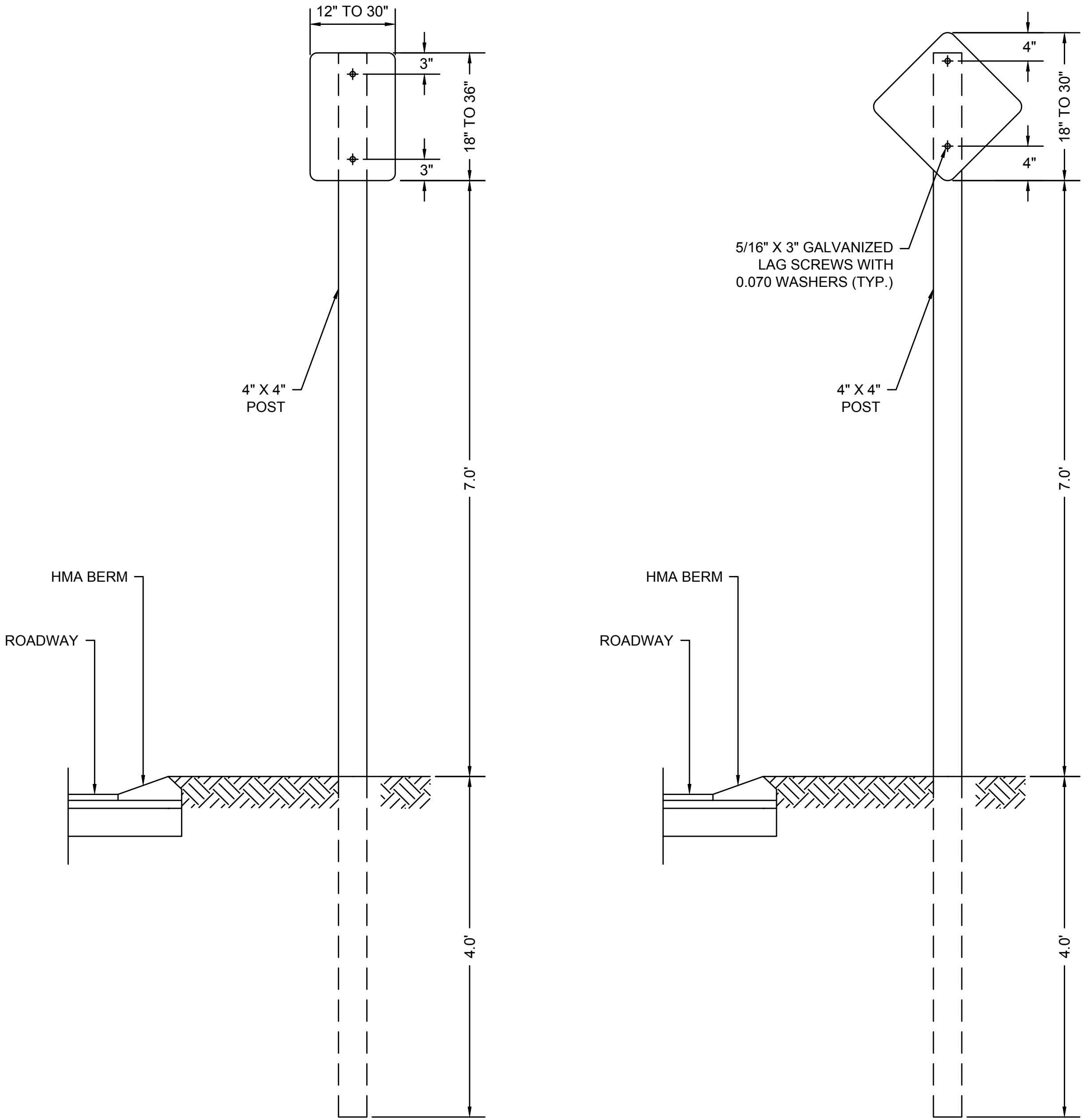
NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	PM&S
			DRAWING NO.:	
				31 OF 58

TRAFFIC SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER			
D3-1 (PBS)	VAR.	12"	<div>Boulevardre</div>	TOWN STANDARD		2	TOWN STANDARD			4" X 4" PT (2 REQ'D)	PAID UNDER ITEM. 830.	
D3-2 (PBS)	VAR.	12"	<div>Surfside Rd</div>			1				MOUNT W/ D3-1	PAID UNDER ITEM. 830.	
D3-3 (PBS)	VAR.	12"	<div>Eagles Wing Way</div>			1				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D3-4 (PBS)	VAR.	12"	<div>Pequot St</div>			1				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D3-5 (PBS)	VAR.	12"	<div>Rainbows End</div>			1				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D3-6 (PBS)	VAR.	12"	<div>Lovers Ln</div>			1				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D3-7 (PBS)	VAR.	12"	<div>Pochick Ave</div>			2				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D3-8 (PBS)	VAR.	12"	<div>Clifford St</div>			1				MOUNT W/ R1-1	PAID UNDER ITEM. 830.	
D9-2	24	24	<div>H</div>	MUTCD STANDARD		1	MUTCD STANDARD			4" X 4" PT (1 REQ'D)	4.00	4.00
M6-3	21	15	<div>↑</div>			1				MOUNT W/ D9-2	2.18	2.18
R1-1	30"	30"	<div>STOP</div>			8				4" X 4" PT (8 REQ'D)	6.25	50.00
R1-1(b)	18"	18"	<div>STOP</div>			6				4" X 4" PT (6 REQ'D)	2.25	13.50
R1-2(b)	18"	18"	<div>YIELD</div>			6				4" X 4" PT (6 REQ'D)	1.13	6.75
W11-15	30"	30"	<div></div>			8				4" X 4" PT (8 REQ'D)	6.25	50.00
W16-7pL	24"	12"	<div></div>			4				MOUNT W/ W11-15	2.00	8.00
W16-9P	24"	12"	<div>AHEAD</div>			4				MOUNT W/ W11-15	2.00	8.00

NOTES:

- 1) ALL WARNING, REGULATORY AND ROUTE MARKERS SHALL BE FABRICATED WITH HIGH INTENSITY PRISMATIC REFLECTIVE SHEETING (SEE SECTION M9.30.0) TYPE III OR IV.
2) ALL SIGNS NOTED AS "R&R" SHALL BE MOUNTED ON NEW 4" X 4" PRESSURE TREATED POSTS (SEE SPECIFICATIONS)
3) QUANTITIES OF SIGNS AND POSTS SHOWN ON THIS SHEET MAY DIFFER FROM THE PAVEMENT MARKING & SIGNING PLANS. WHERE DIFFERENCES OCCUR, THE PAVEMENT MARKING & SIGNING PLANS SHALL PREVAIL.



SIGN MOUNTING DETAIL
NOT TO SCALE

GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:

TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

TRAFFIC SIGN SUMMARY

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY: JDB
			CHECK BY: JFO
			DATE: 5/04/2016
			SCALE: AS NOTED
			JOB NO.: ----
			FILE NAME: PM&S
			DRAWING NO.: 32 OF 58

TRAFFIC CONTROL NOTES

- GENERAL
- ALL TEMPORARY TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL MEASURES SHALL CONFORM TO THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), MASSDOT'S "STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TRAFFIC MANAGEMENT PLANS", THE STANDARD SPECIFICATIONS, AND THE FOLLOWING NOTES.
 - THE TEMPORARY TRAFFIC CONTROL PLANS CONTAINED HEREIN ARE GIVEN AS A GUIDE FOR TYPICAL WORK ZONE TRAFFIC CONTROL APPLICATIONS FOR THE TYPES OF WORK ANTICIPATED FOR THIS PROJECT. THEY ARE NOT INTENDED TO COVER ALL POSSIBLE CONSTRUCTION OPERATIONS WHICH THE CONTRACTOR MAY CHOOSE TO EMPLOY. WORK ZONE TRAFFIC CONTROL FOR OTHER CONSTRUCTION OPERATIONS OR OTHER TRAFFIC SITUATIONS IF APPLICABLE SHALL BE IN ACCORDANCE WITH THE REFERENCES LISTED IN NOTE NO. 1 AND AS APPROVED OR DIRECTED BY THE ENGINEER.
 - LANE RESTRICTIONS MAY NOT REMAIN OVERNIGHT OR DURING NON-WORKING HOURS. AFTER EACH WORKING DAY, TRAFFIC CONTROL DEVICES THAT ARE NOT REQUIRED SHALL BE REMOVED OFF THE ROADWAY OR FULL DEPTH CONSTRUCTION AREA AND PLACED SO AS NOT TO IMPEDE PEDESTRIAN AREAS, ABUTTER ACCESS OR CAUSE CONFUSION TO MOTORISTS. IN CERTAIN CIRCUMSTANCES, AND ONLY WITH THE APPROVAL OF THE ENGINEER, CAN LANE RESTRICTIONS REMAIN OVERNIGHT.
 - CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT AND SIMILAR OPERATIONS.
 - PLACE ALL CONSTRUCTION SIGNING, TRAFFIC CONTROL DEVICES AND TEMPORARY PAVEMENT MARKINGS FOR EACH PHASE PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - ONE (1) THRU TRAVEL LANE HAVING A MINIMUM WIDTH OF 11'-0" SHALL BE PROVIDED FOR BOTH DIRECTIONS (LANE MAY BE SHARED AND DIRECTION OF TRAVEL TO ALTERNATE UNDER POLICE OFFICER CONTROL) DURING ALL PHASES OF CONSTRUCTION AS SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. MINIMUM LANE WIDTH IS MEASURED FROM THE EDGE OF DRUMS OR TEMPORARY BARRIER.
 - WHEN WORK INFRINGES UPON THE TRAVELED WAY, WORK SHALL BE RESTRICTED TO OFF-PEAK HOURS ONLY (NORMALLY 8:00am TO 4:00pm, MONDAY TO FRIDAY). THE CONTRACTOR SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF ROAD CLOSURE.
 - TAPER LENGTH FORMULAE FOR CHANNELIZATION DEVICES:
ENGLISH UNITS:
L = WxS FOR SPEED EQUAL TO OR GREATER THAN 45 M.P.H.
L = WS²/60 FOR SPEED EQUAL TO OR LESS THAN 40 M.P.H.
WHERE: L = MIN. LENGTH OF TAPER, S = POSTED SPEED, W = OFFSET WIDTH.
 - ADVISORY SPEED LIMIT, IF USED, SHALL BE SET IN THE FIELD BY THE ENGINEER. W13-1 PLATES SHALL BE USED WHERE APPROPRIATE.
 - DISTANCES SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS ARE A GUIDE ONLY, AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
 - CONTRACTOR SHALL MAINTAIN BICYCLE AND PEDESTRIAN ACCESS AT ALL TIMES.

- GRADE DIFFERENCES
- WHERE THERE IS A LONGITUDINAL DIFFERENCE IN ELEVATION BETWEEN EXISTING PAVEMENT AND ADJACENT TRAVEL SURFACE (UNDER REPAIR OR RECONSTRUCTION), THE CONTRACTOR SHALL PATCH A TEMPORARY HMA WEDGE WITH A 12:1 (OR FLATTER) SLOPE FOR SMOOTH TRANSITION. SEE DETAIL, THIS SHEET.
 - CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 2" DURING NON-WORKING HOURS WILL REQUIRE DELINEATION BY USE OF REFLECTORIZED DRUMS.
 - CROSS-SECTIONAL GRADE DIFFERENCES IN EXCESS OF 4" DURING NON-WORKING HOURS SHALL BE PROTECTED BY BACKFILLING WITH A WEDGE OF EARTHWORK TO BE COMPACTED AT 4:1 (OR FLATTER) SLOPE AND WILL ALSO REQUIRE DELINEATION BY USE OF DRUMS.
 - A MINIMUM SLOPE OF 4:1 MUST BE MAINTAINED AFTER WORKING HOURS DURING SUBBASE AND BASE COURSE INSTALLATION ALONG EDGE OF THE TRAVELWAY (SEE DETAIL, THIS SHEET). A MAXIMUM SLOPE OF 8:1 MUST BE MAINTAINED ON ALL ABUTTER ACCESS DRIVES AND A MAXIMUM SLOPE OF 12:1 MUST BE MAINTAINED ON ALL SIDEWALKS.

- CONSTRUCTION SIGNING
- THE FIRST CONSTRUCTION SIGN IN A SERIES ON EACH APPROACH TO THE PROJECT SHALL BE FLUORESCENT ORANGE, HIGH PERFORMANCE (OR HIGH INTENSITY) SHEETING.
 - ALL CONSTRUCTION SIGNS SHALL BE BLACK LEGEND ON A REFLECTORIZED ORANGE BACKGROUND UNLESS OTHERWISE NOTED.
 - CONSTRUCTION SIGNING SHOWN ON THE ADVANCE SIGNING PLAN SHALL REMAIN IN PLACE FOR THE ENTIRE PROJECT DURATION, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 - STANDARD ORANGE OR FLUORESCENT RED-ORANGE FLAGS (16"x16" MIN.) MAY BE ATTACHED TWO (2) EACH ON ALL ADVANCE WARNING SIGNS. FLAGS SHALL NOT INTERFERE WITH A CLEAR VIEW OF THE SIGN FACE.
 - EXISTING GUIDE SIGNS SHALL BE TEMPORARILY RESET AS DIRECTED BY THE ENGINEER.
 - ALL SIGNS, INCLUDING EXISTING, THAT ARE NOT REPRESENTATIVE OF ACTUAL WORK CONDITIONS SHALL BE EITHER COVERED OR REMOVED WHEN NOT APPLICABLE.
 - IF USED, ALL W20-4 AND W20-5 SIGNS SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY UNLESS LANE RESTRICTIONS ARE PERMITTED TO REMAIN OVERNIGHT IN ACCORDANCE WITH NOTE NO. 3 ABOVE.
 - USE W20-8 AND W20-7a SIGNS ONLY WHILE POLICE OR FLAGGERS ARE DIRECTING TRAFFIC. THEY SHALL BE TAKEN DOWN OR COVERED AT THE CLOSE OF EACH DAY OR WHEN NOT IN USE.

- PAVEMENT MARKINGS
- PAVEMENT MARKINGS WHICH ARE NO LONGER APPLICABLE SHALL BE REMOVED. APPLY TEMPORARY MARKINGS WHERE SHOWN ON THE TEMPORARY TRAFFIC CONTROL PLANS.
 - ON PROJECTS WHERE PAVEMENT OVERLAY IS NOT DESIGNATED, EXISTING PAVEMENT MARKINGS WHICH ARE IN CONFLICT WITH TEMPORARY TRAFFIC CONTROLS SHOULD BE COVERED TEMPORARILY WITH BLACKOUT TAPE, AS DIRECTED BY THE ENGINEER. FOR THE FULL DURATION OF THE PHASE IN PROGRESS, TEMPORARY PAINTED OR REMOVABLE TAPE MARKINGS SHALL BE USED AS NECESSARY FOR ALL PHASES OF CONSTRUCTION.

- CHANNELIZATION
- THE MAXIMUM SPACING BETWEEN CHANNELIZATION DEVICES (DRUMS OR CONES) SHALL BE APPROXIMATELY EQUAL IN FEET TO THE POSTED SPEED LIMIT. THE MINIMUM SPACING SHALL BE 20' O.C.
 - REFLECTORIZED CONES SHALL BE 36" HIGH.
 - ALL TEMPORARY TRAFFIC CONTROL EQUIPMENT MUST PASS THE CRITERIA SET FORTH IN NCHRP 350 "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR THE MANUAL FOR THE ASSESSMENT OF SAFETY HARDWARE (MASH). IF THEY DO NOT MEET THESE CRITERIA THEY MUST BE REMOVED FROM THE PROJECT."

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE

P/F

POLICE/FLAGGER DETAIL

▨

TYPE III BARRICADE

□

CHANGEABLE MESSAGE SIGN

→

ARROW BOARD
- ▨

WORK ZONE

→

DIRECTION OF TRAFFIC

⬇

IMPACT ATTENUATOR

□

MEDIAN BARRIER

⬇

MEDIAN BARRIER WITH WARNING LIGHTS
- 🚚

WORK VEHICLE

⬇

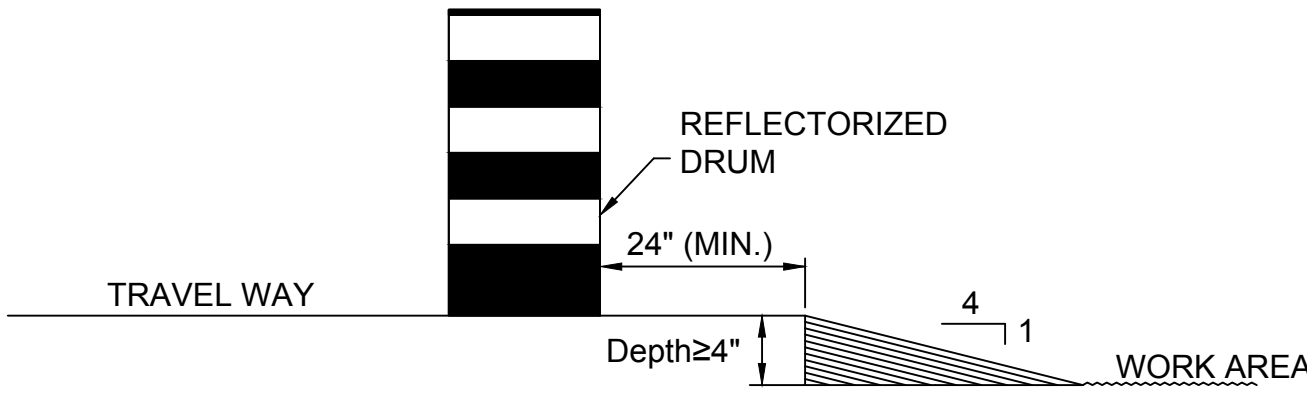
TRUCK MOUNTED ATTENUATOR

⬅

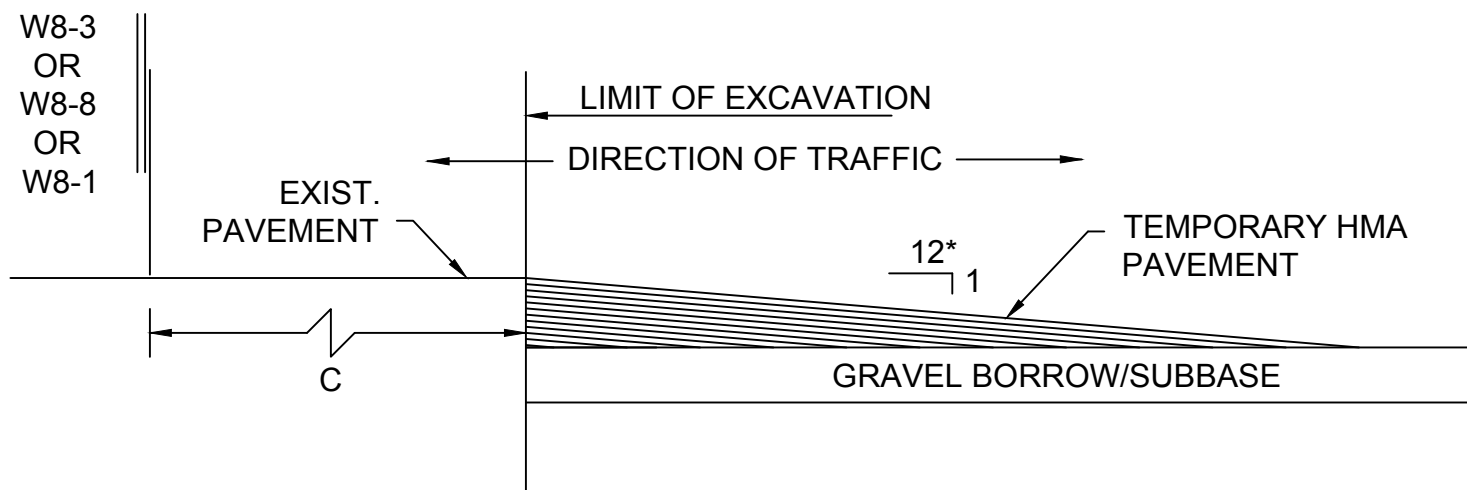
TRAFFIC OR PEDESTRIAN SIGNAL

●

SIGN



LATERAL DROP-OFF DETAIL
NOT TO SCALE



LONGITUDINAL DROP-OFF DETAIL
NOT TO SCALE

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS

LATERAL AND LONGITUDINAL
DROP-OFF DETAILS

PORTABLE CHANGEABLE MESSAGE SIGNS

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) SHALL CONFORM TO THE 2009 MUTCD AS AMENDED AND SHOULD BE PLACED ON THE SHOULDER OF THE ROADWAY OR IF PRACTICAL SET WELL AWAY FROM THE TRAVEL LANE. MESSAGE SIGNS SHOULD BE PROTECTED WITH RETROREFLECTIVE TEMPORARY TRAFFIC CONTROL DEVICES WHEN PLACED WITHIN THE AVAILABLE CLEAR ZONE OR ELSE SHIELDED WITH A BARRIER OR CRASH CUSHION. THE LOCATION AND USE OF THE PCMS SHALL BE DETERMINED DURING THE PRE-CONSTRUCTION MEETING. ALTERNATIVE MESSAGES MAY BE DETERMINED BY THE ENGINEER IN THE FIELD

THE SUGGESTED MESSAGE TWO WEEKS IN ADVANCE OF CONSTRUCTION SHOULD READ AS FOLLOWS:

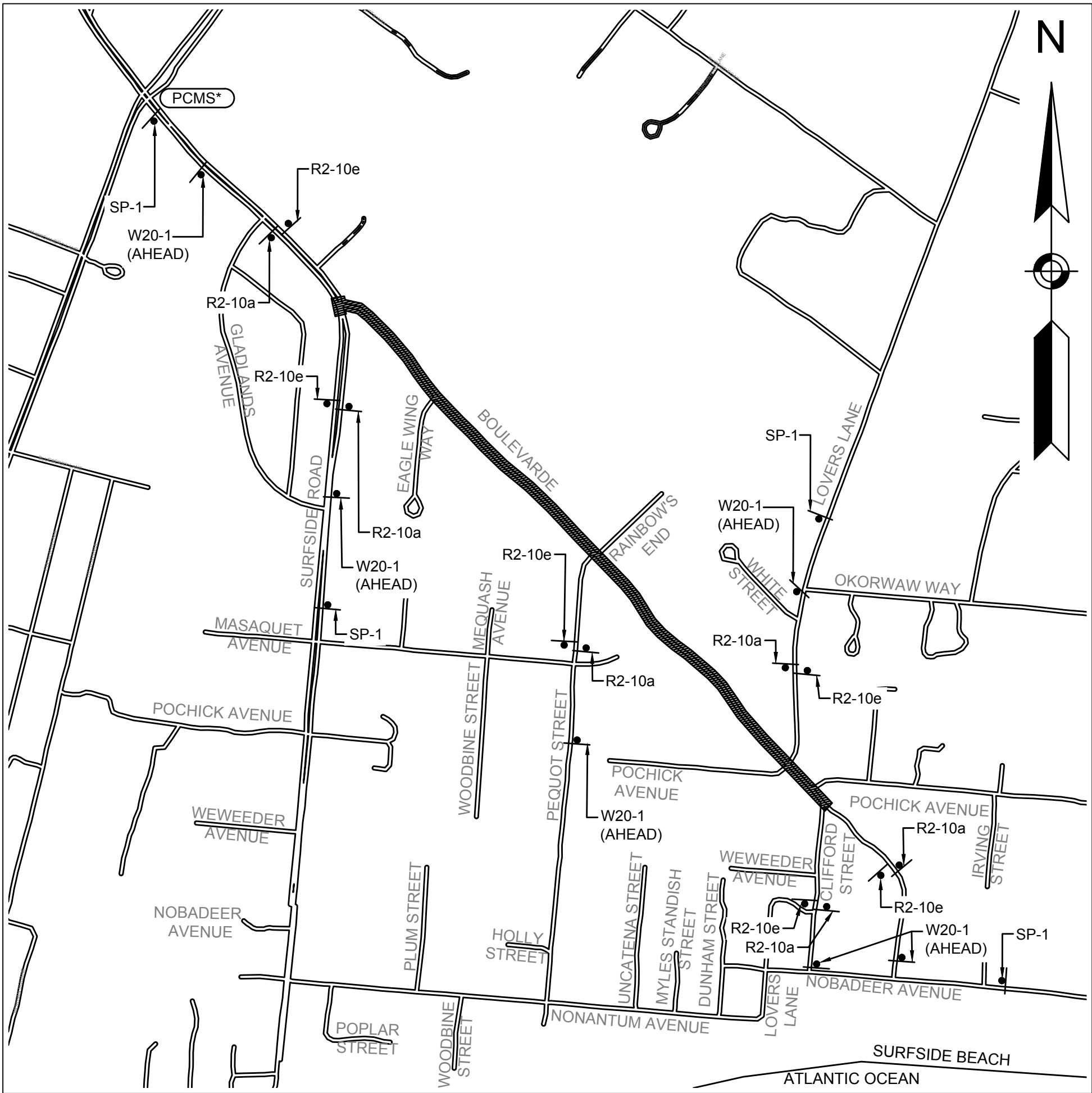
(MESSAGE 1)

B	O	U	L	V	R	D	.
R	O	A	D	W	O	R	K

(MESSAGE 2)

B	E	G	I	N	S
X	X	X	X	X	X

ADVANCE WARNING SIGNING PLAN



SCALE: 1" = 600'

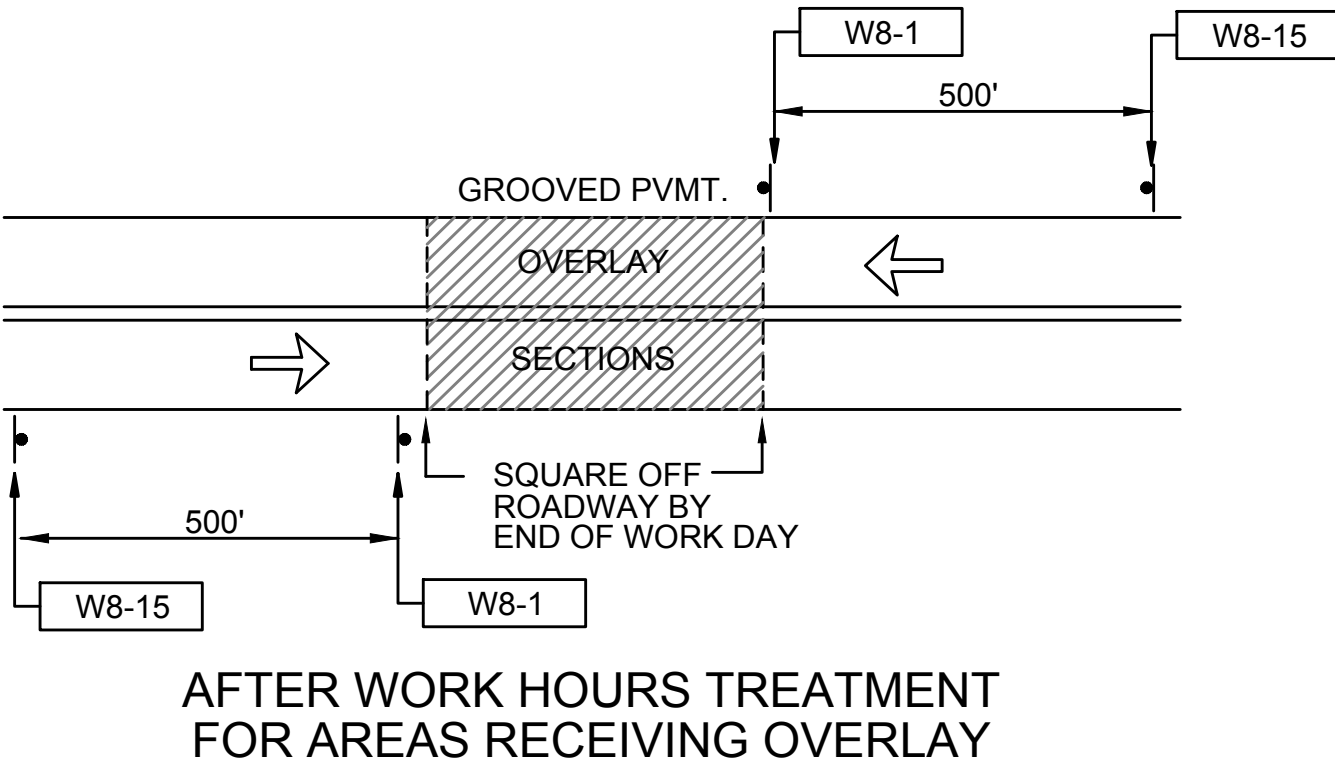
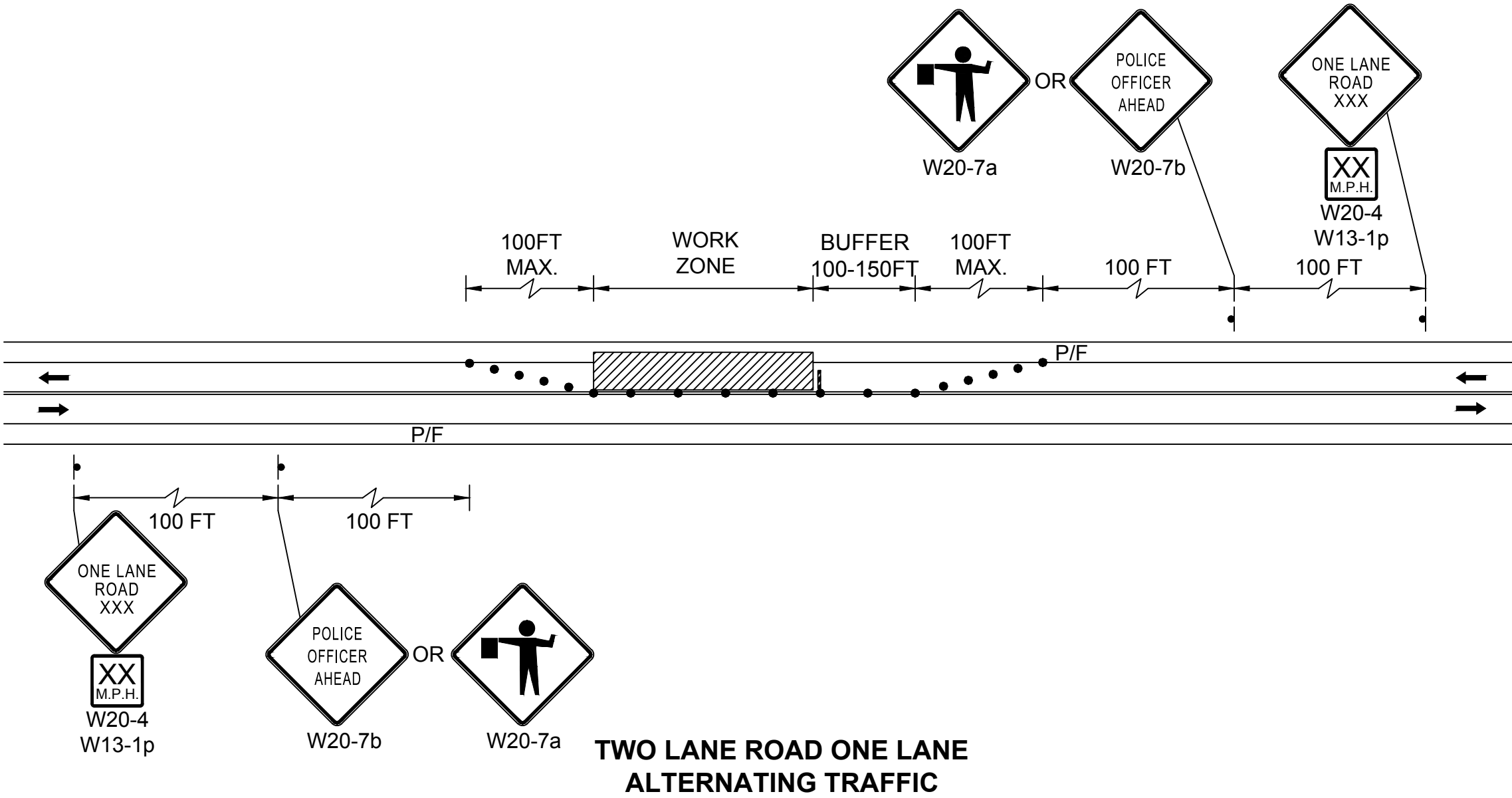
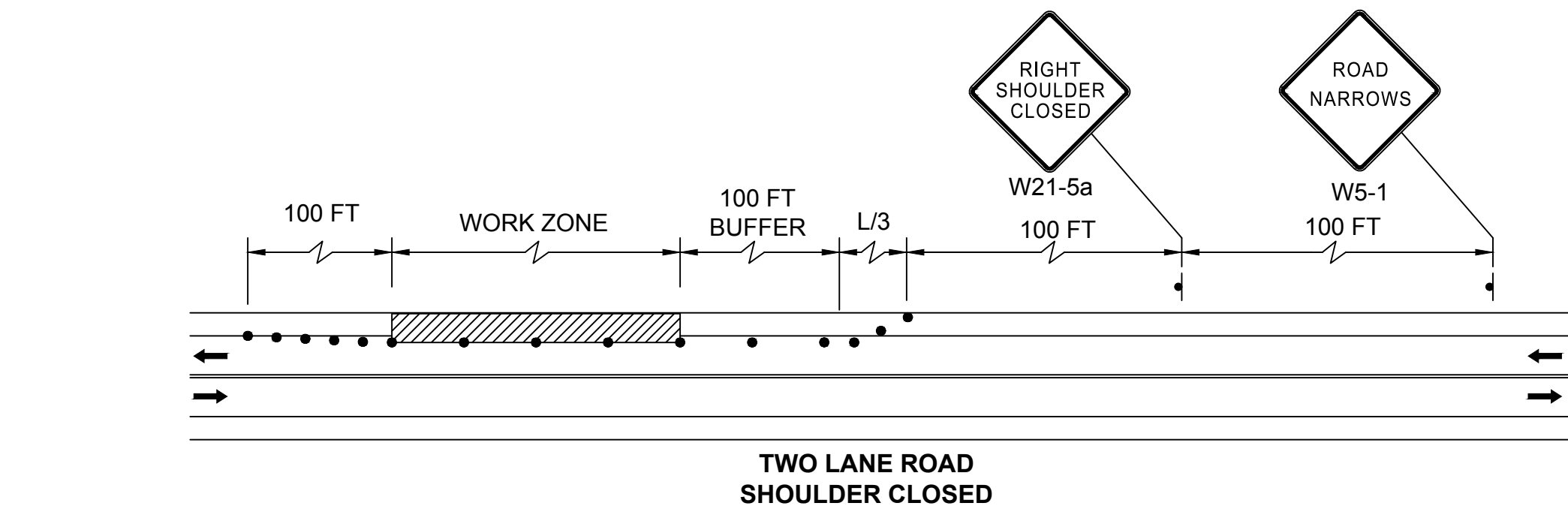
TEMPORARY TRAFFIC CONTROL PLAN

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JOB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	TTCP
			DRAWING NO.:	
				33 OF 58

CONSTRUCTION SIGN SUMMARY

IDENTIFI- CATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)		NUMBER OF SIGNS REQUIRED	COLOR			UNIT AREA IN SQUARE FEET	AREA IN SQUARE FEET
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING		BACK- GROUND	LEGEND	BORDER		
R2-10a	48"	36"	WORK ZONE SPEEDING FINES DOUBLED	MASSDOT STANDARD		6	MASSDOT STANDARD			12.00	72.00
R2-10e	36"	48"	END ROAD WORK DOUBLE FINES END			6				12.00	72.00
SP-1	48"	24"	BOULEVARDE UNDER CONSTRUCTION SEEK ALTERNATE ROUTE	4"C	2.5" 2.5"	4	ORANGE	BLACK	BLACK	8.00	32.00
W5-1	36"	36"	ROAD NARROWS	MUTCD STANDARD		1	MUTCD STANDARD			9.00	9.00
W8-1	36"	36"	BUMP			2				9.00	18.00
W8-3	36"	36"	PAVEMENT ENDS			2				9.00	18.00
W8-8	36"	36"	ROUGH ROAD			2				9.00	18.00
W8-15	36"	36"	GROOVED PAVEMENT AHEAD			2				9.00	18.00
W13-1p	24"	30"	XX M.P.H.			2				5.00	10.00
W20-1 (AHEAD)	36"	36"	ROAD WORK AHEAD			6				9.00	54.00
W20-4	36"	36"	ONE LANE ROAD (XXX FT)			2				9.00	18.00
W20-7a	36"	36"	WORK ZONE AHEAD			2				9.00	18.00
W20-7b	36"	36"	POLICE OFFICER AHEAD			2				9.00	18.00
W21-5a	30"	30"	RIGHT SHOULDER CLOSED			1				6.25	6.25



GPI

Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

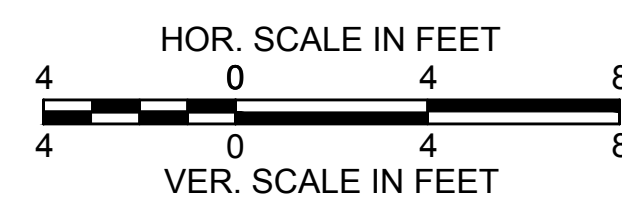
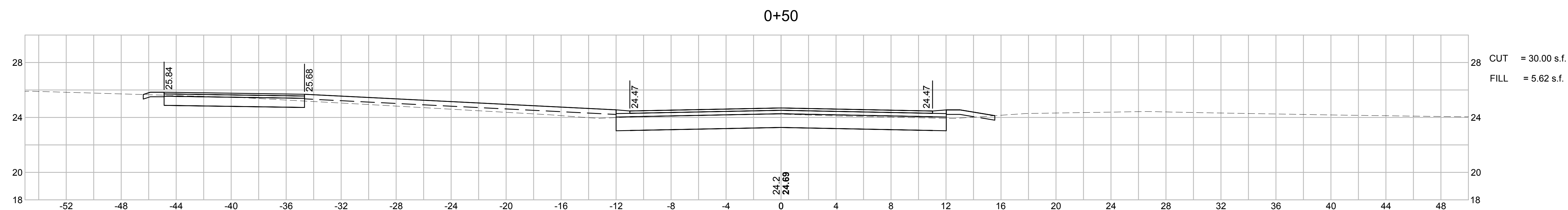
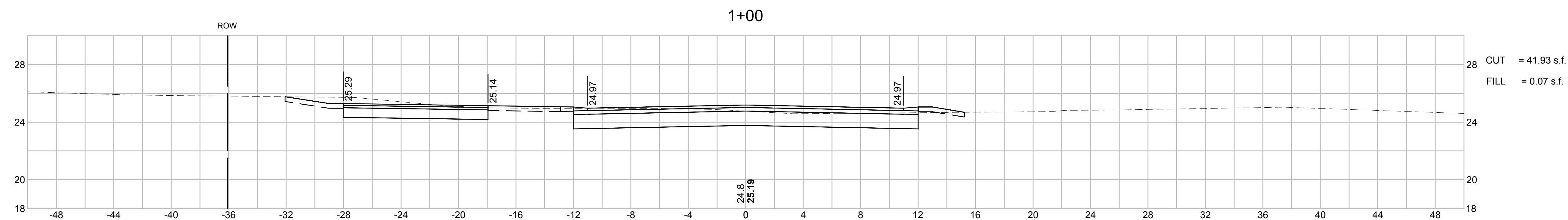
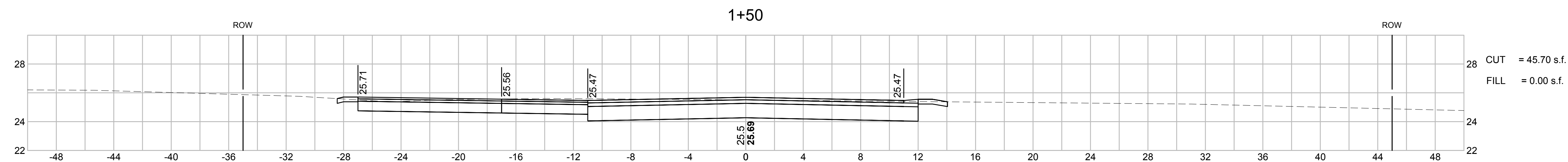
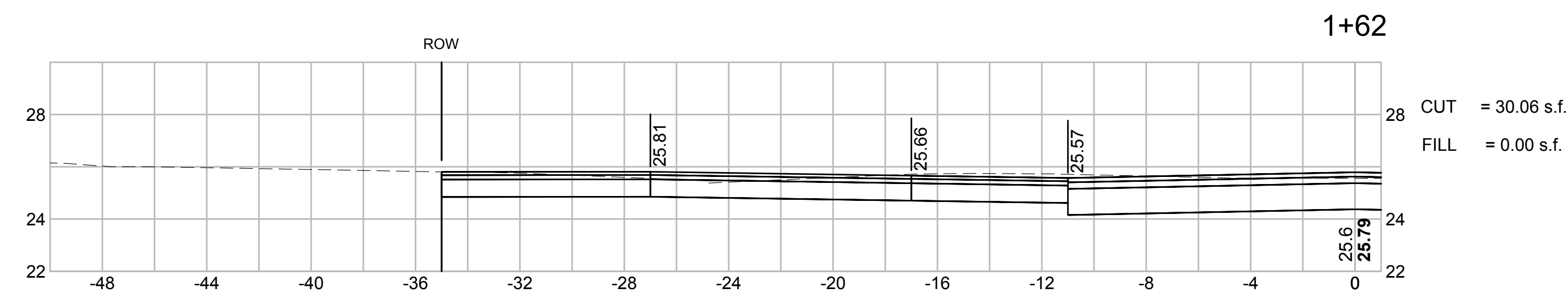
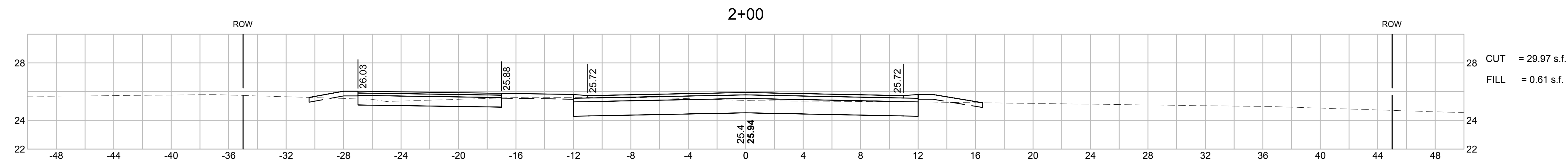
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

TEMPORARY TRAFFIC CONTROL PLAN

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	JDB
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	TTCP
			DRAWING NO.:	
				34 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

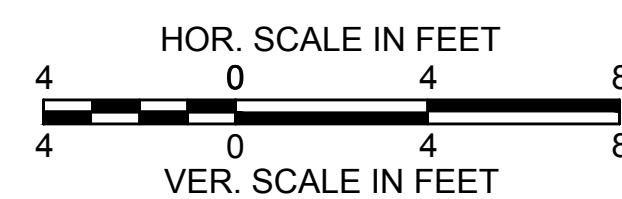
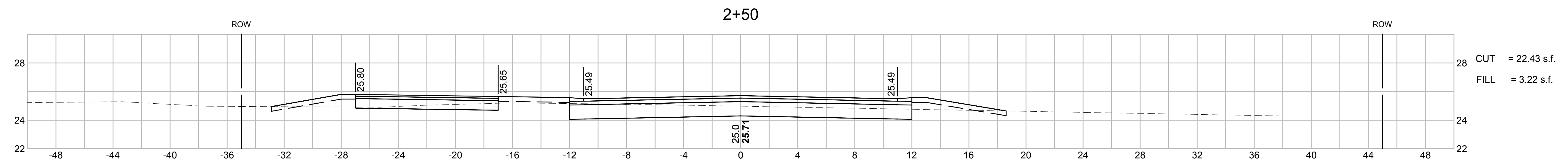
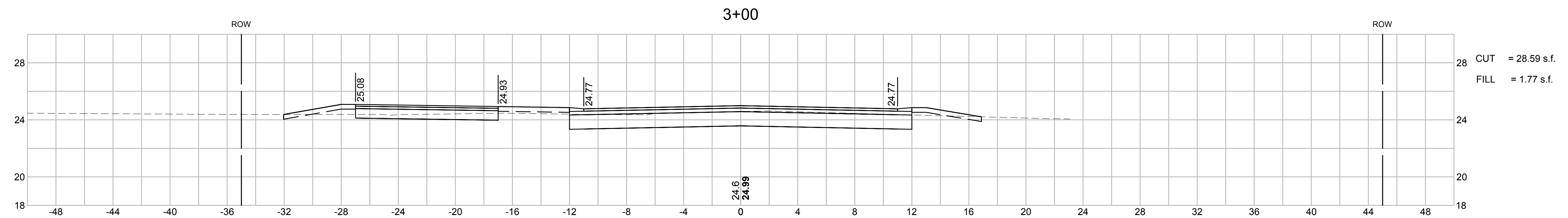
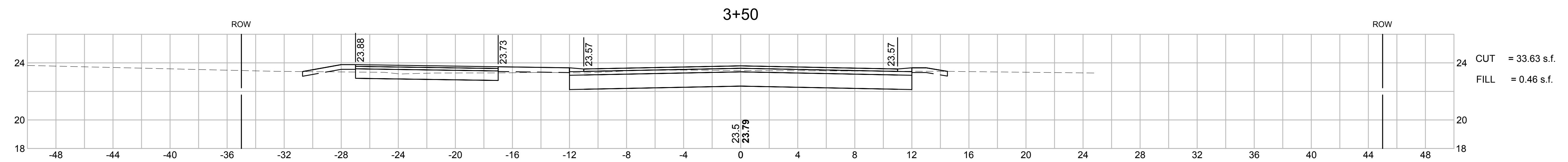
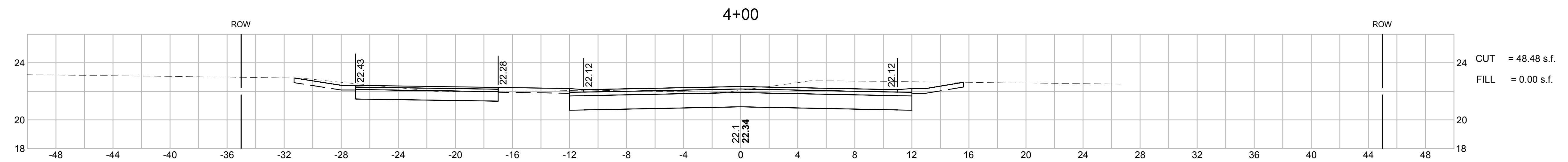
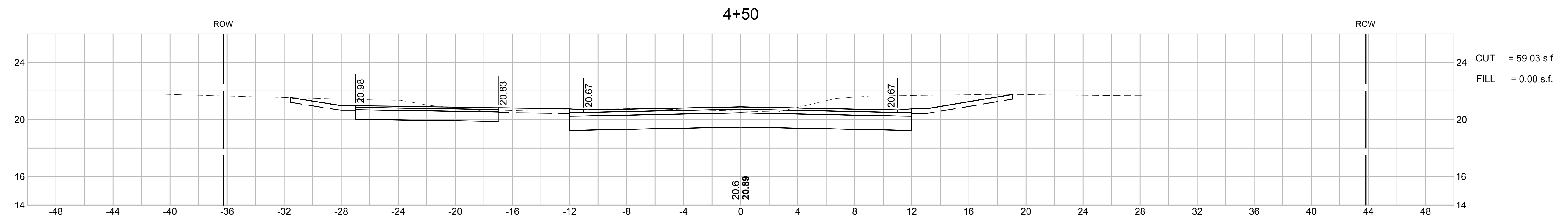
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				36 OF 58



GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

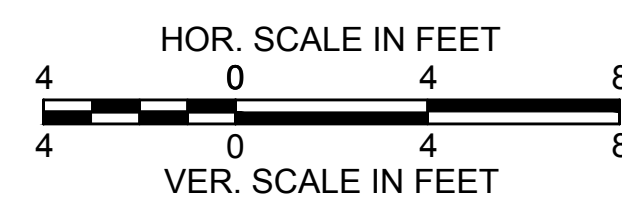
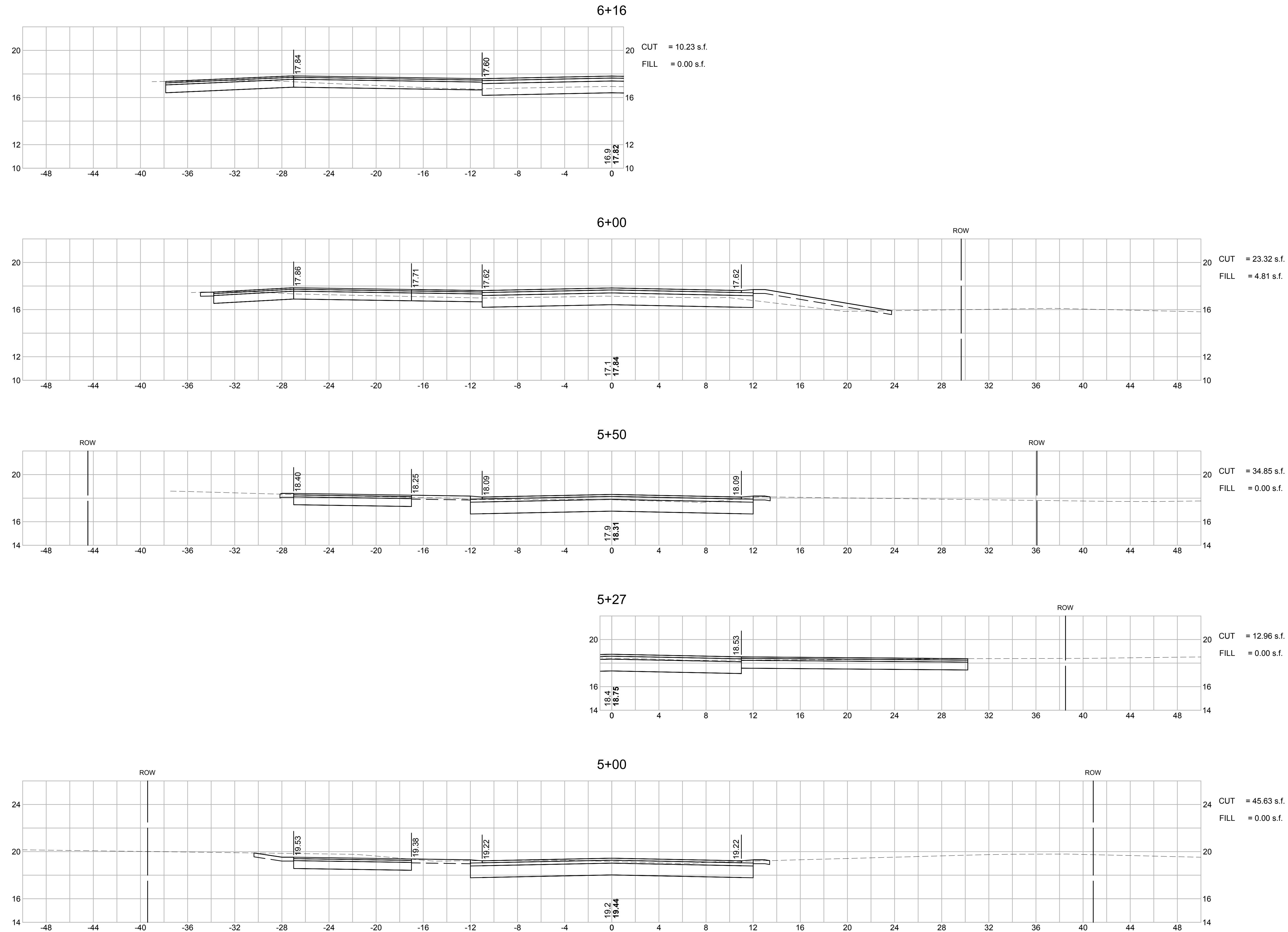
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				37 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

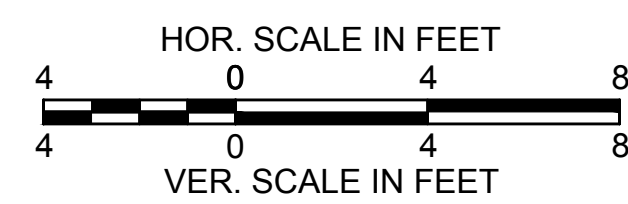
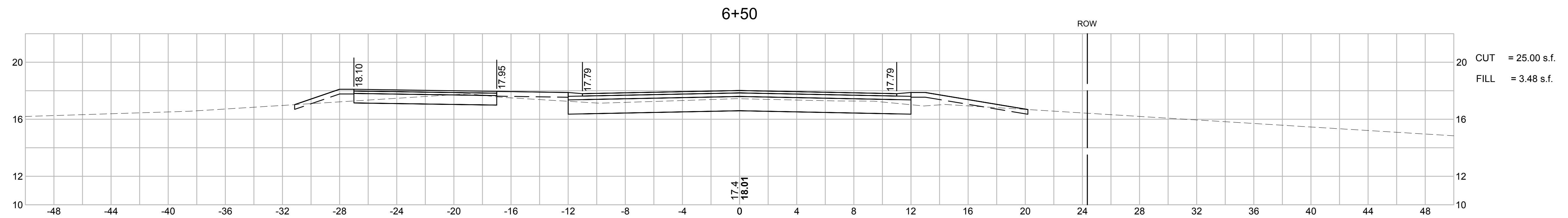
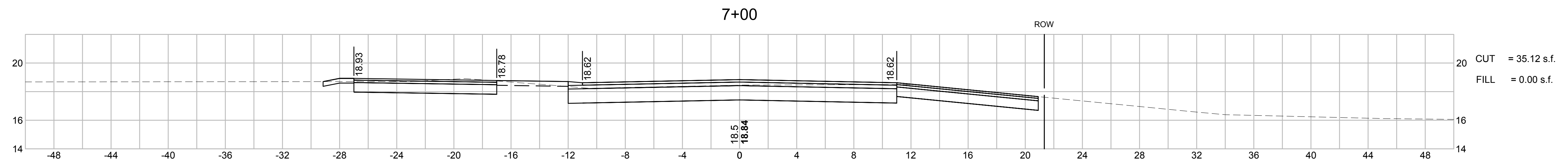
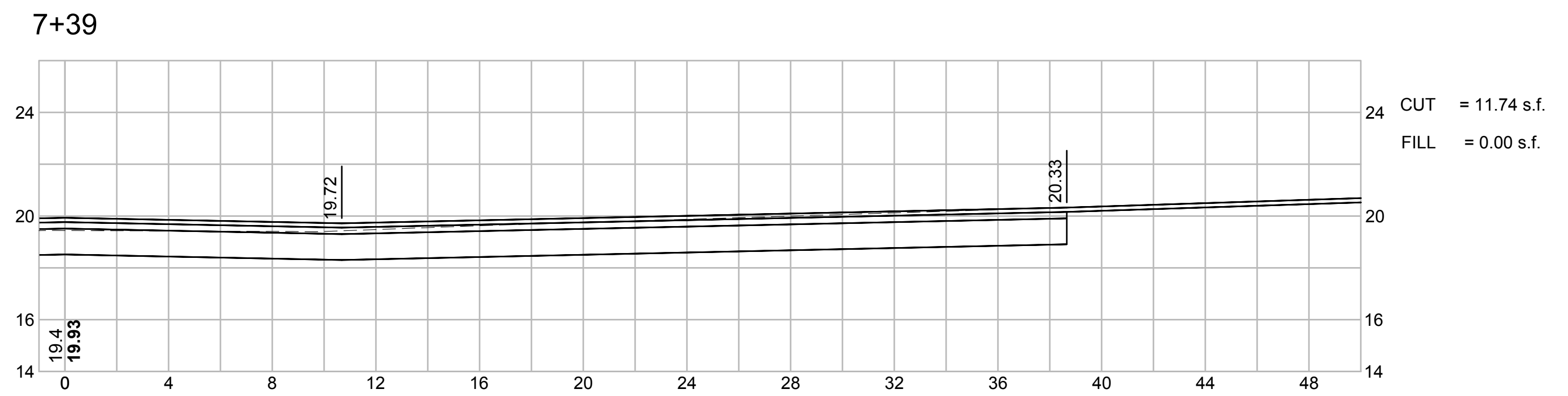
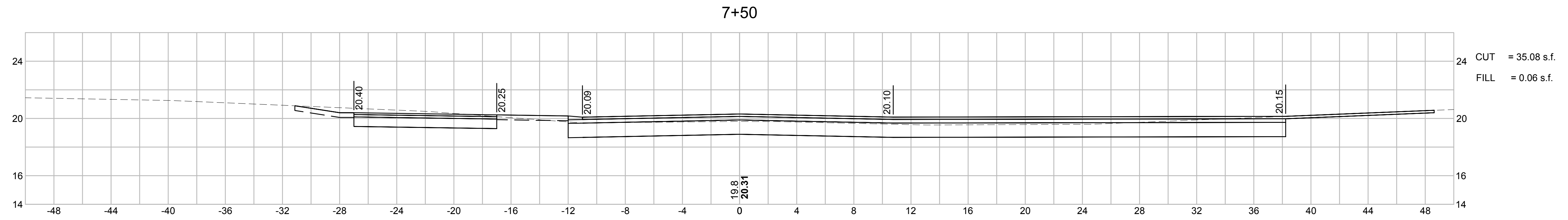
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	38 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

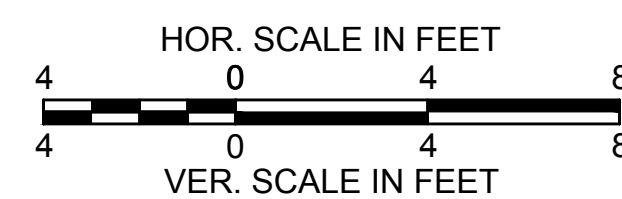
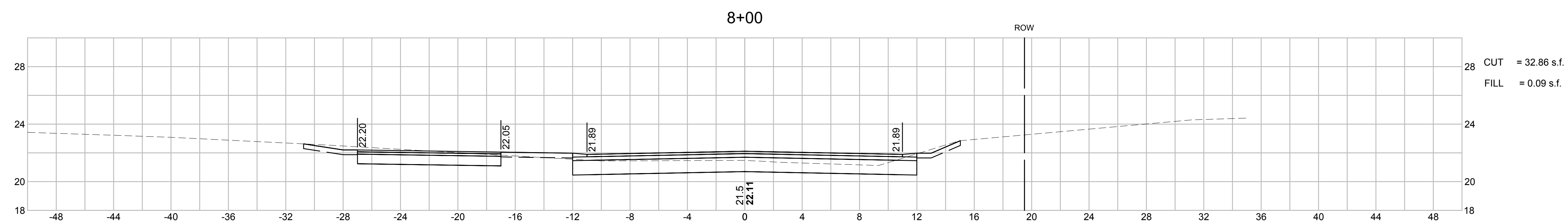
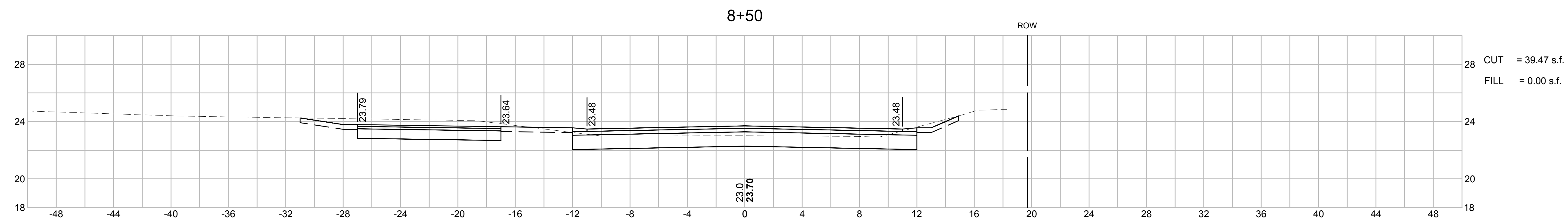
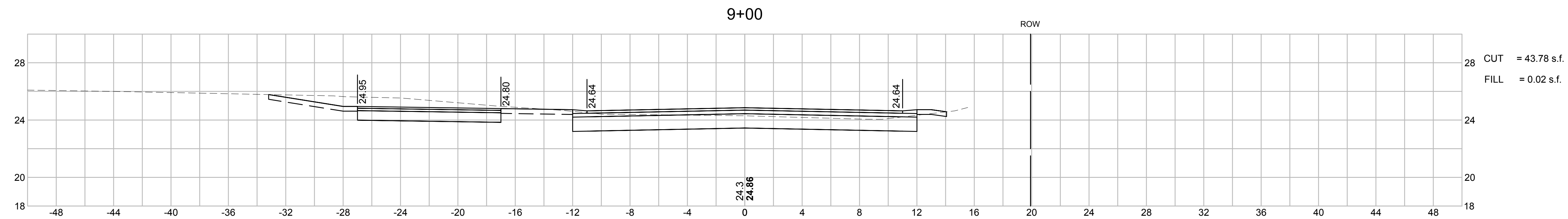
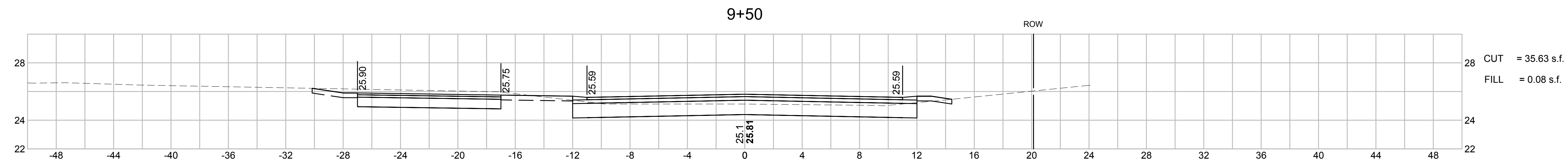
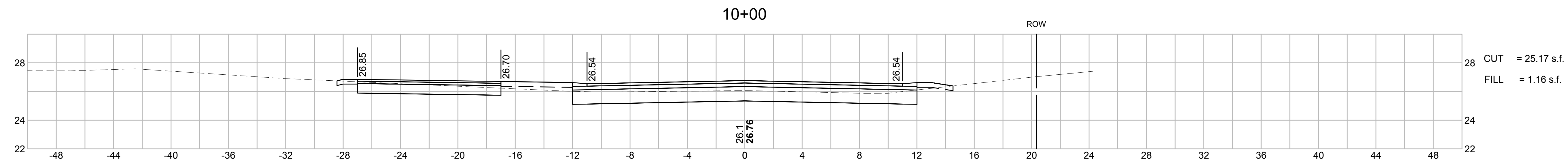
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				39 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

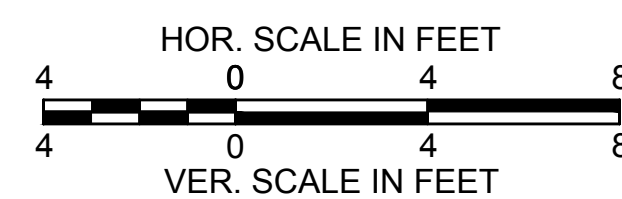
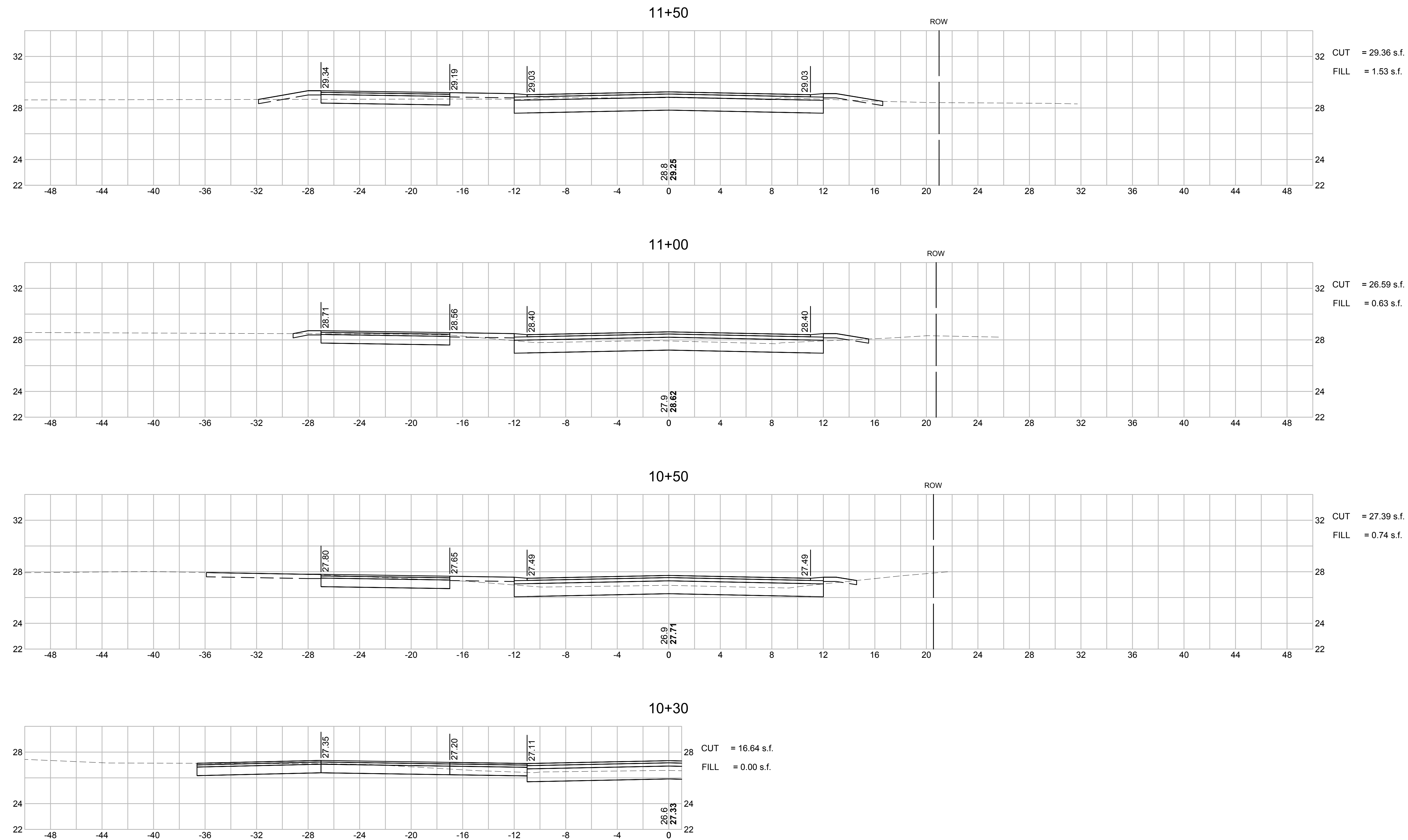
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	40 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

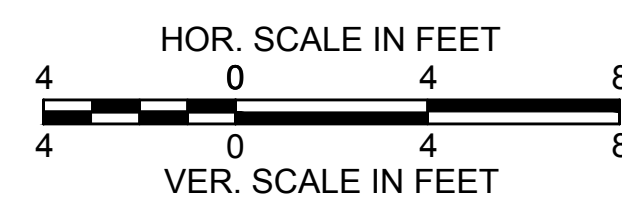
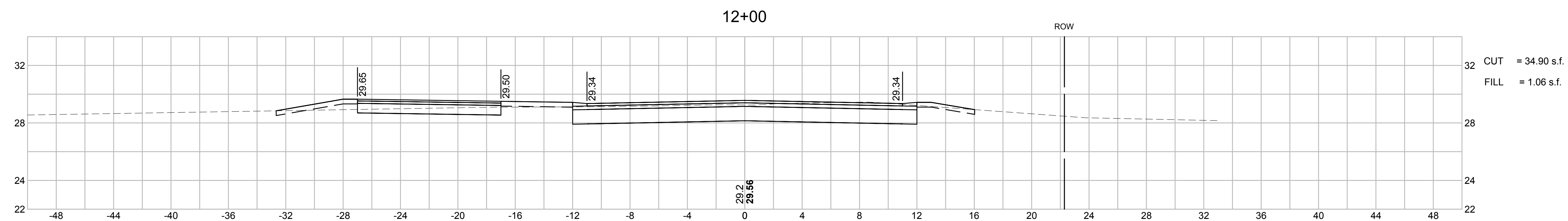
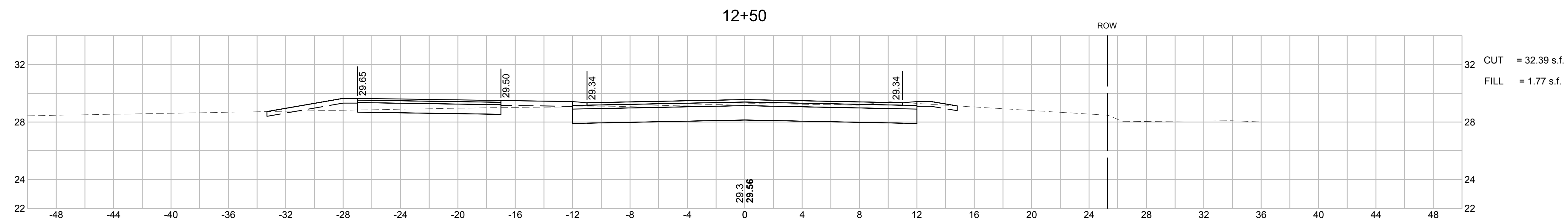
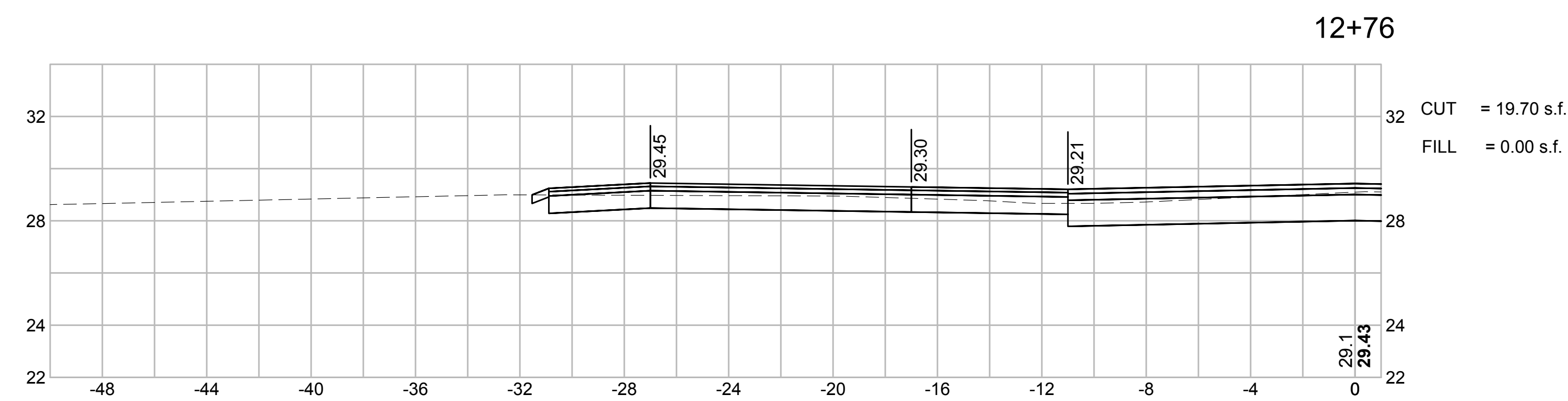
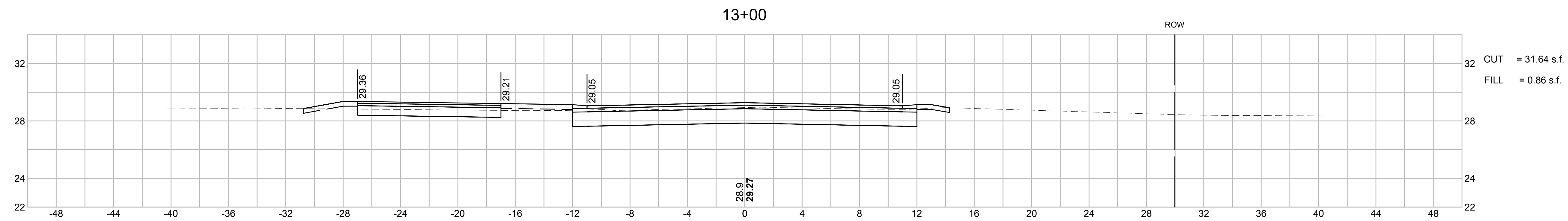
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				41 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

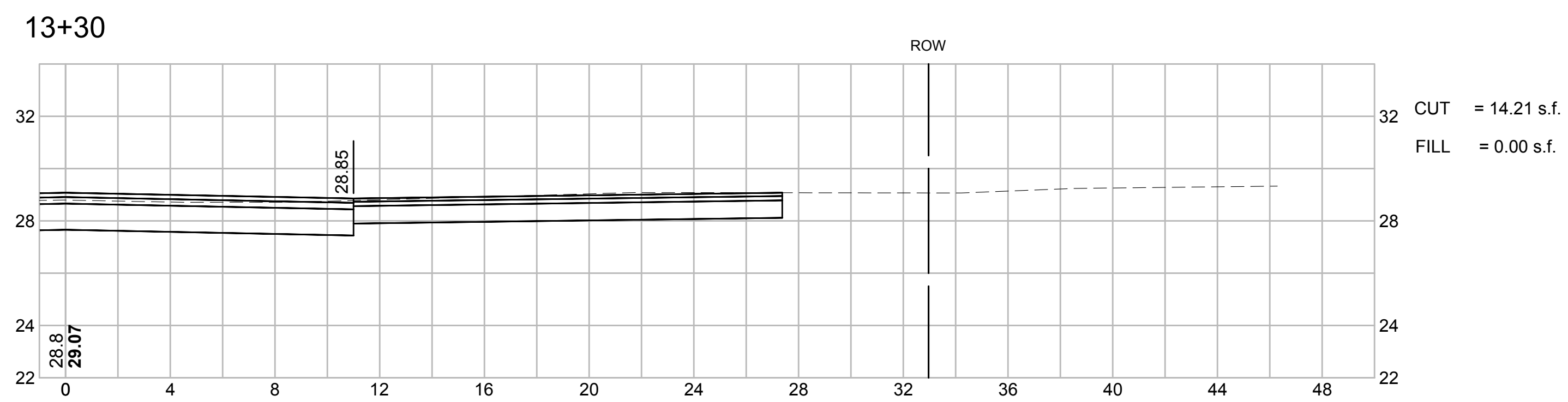
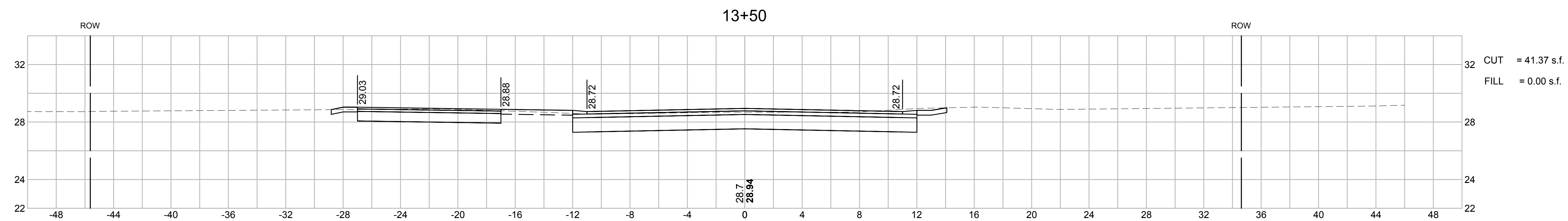
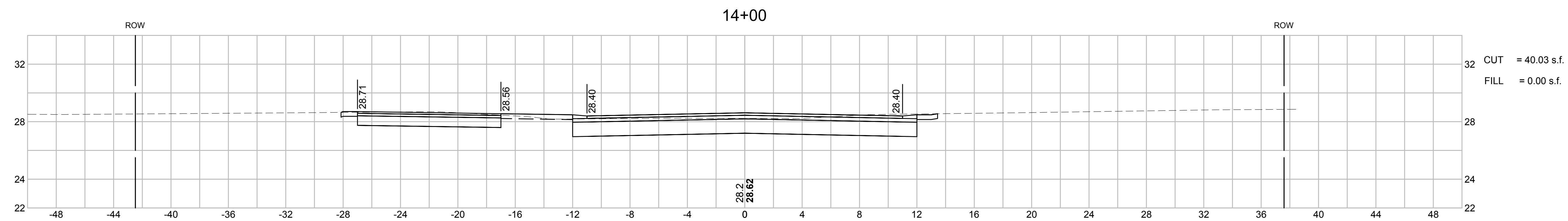
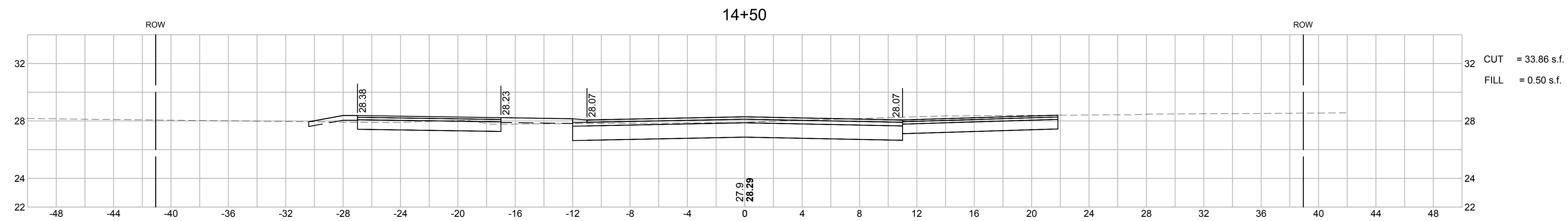
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				42 OF 58



HOR. SCALE IN FEET

4 0 4 8

VER. SCALE IN FEET

4 0 4 8

GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:

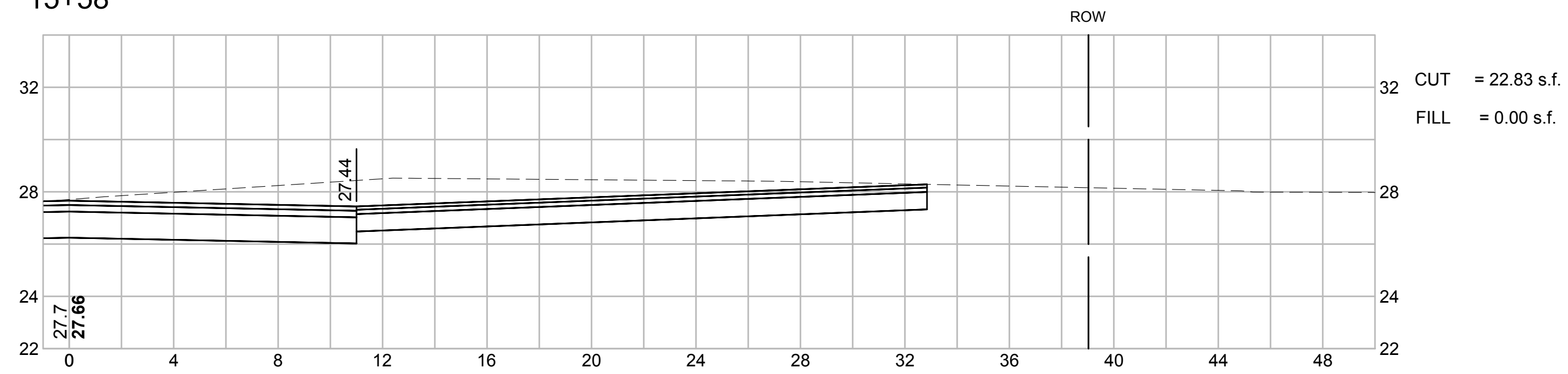
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

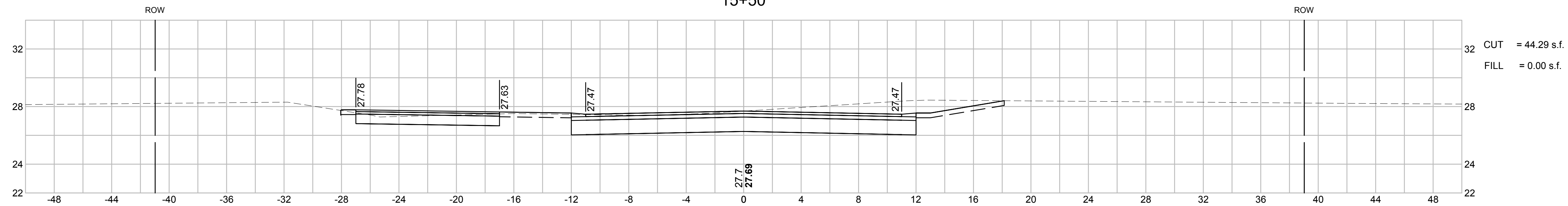
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	43 OF 58

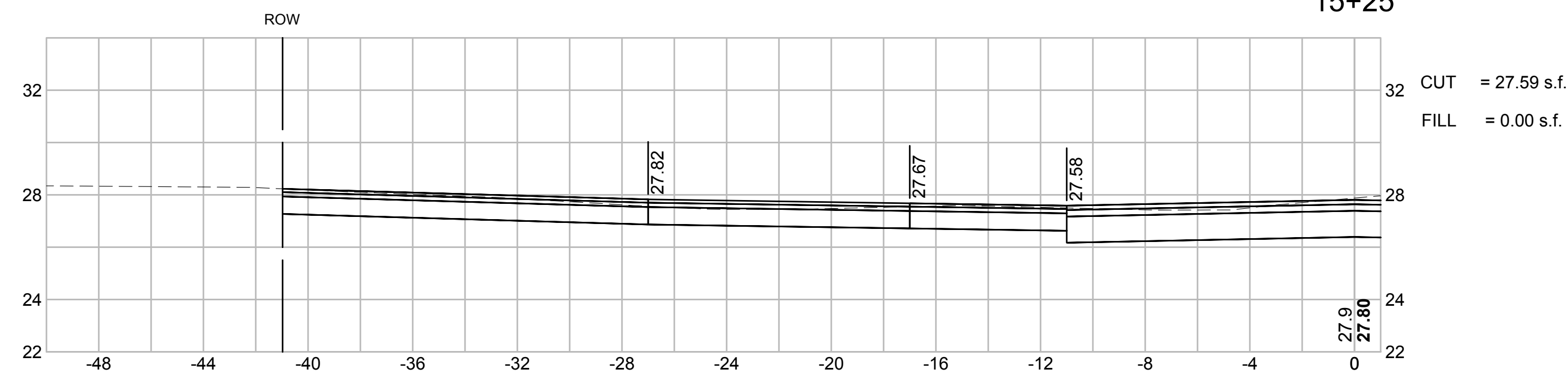
15+58



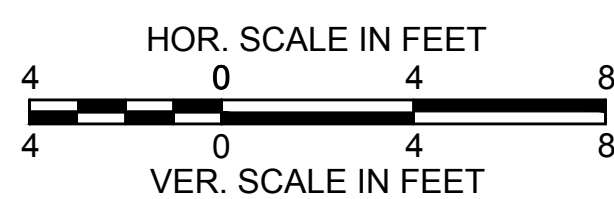
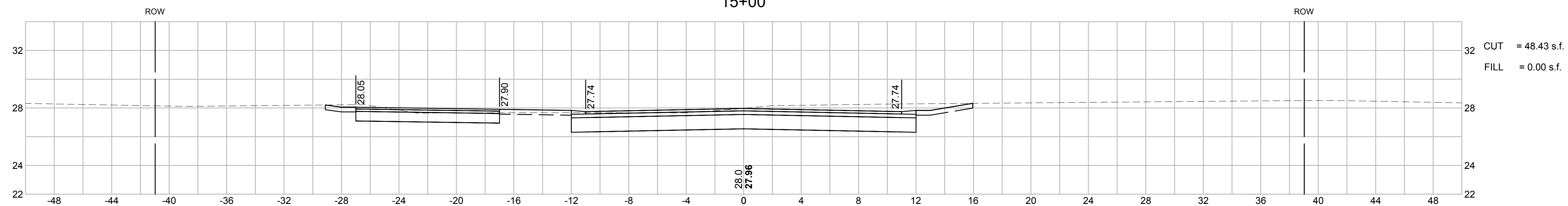
15+50



15+25



15+00



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

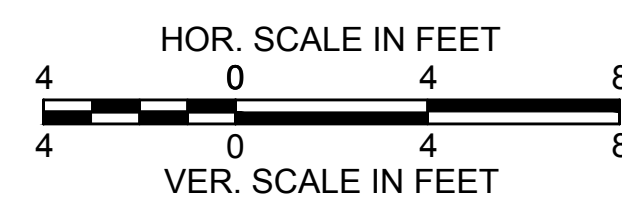
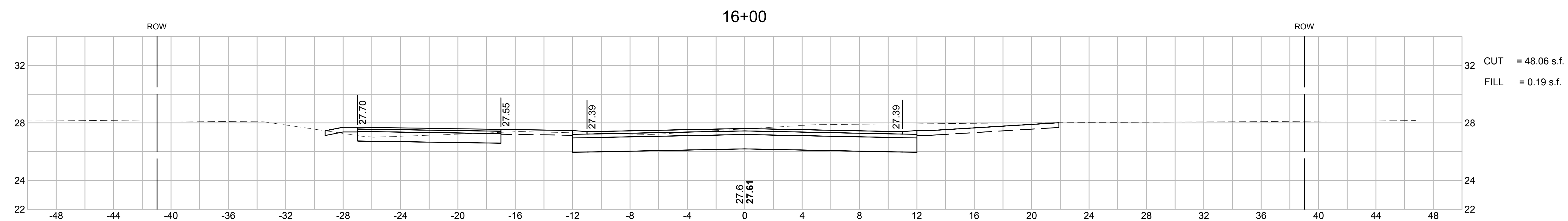
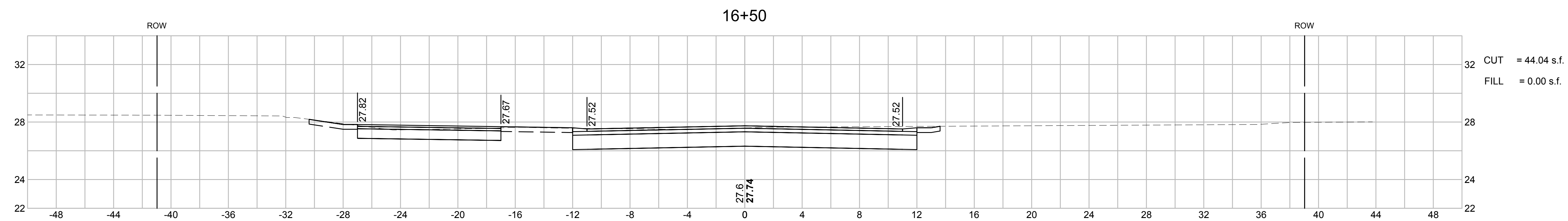
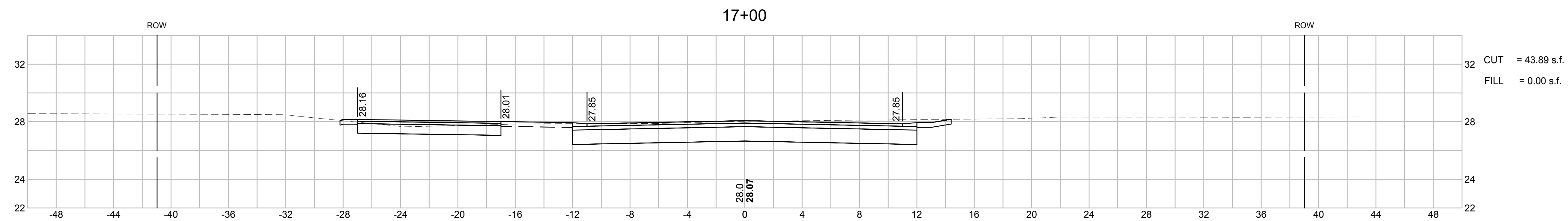
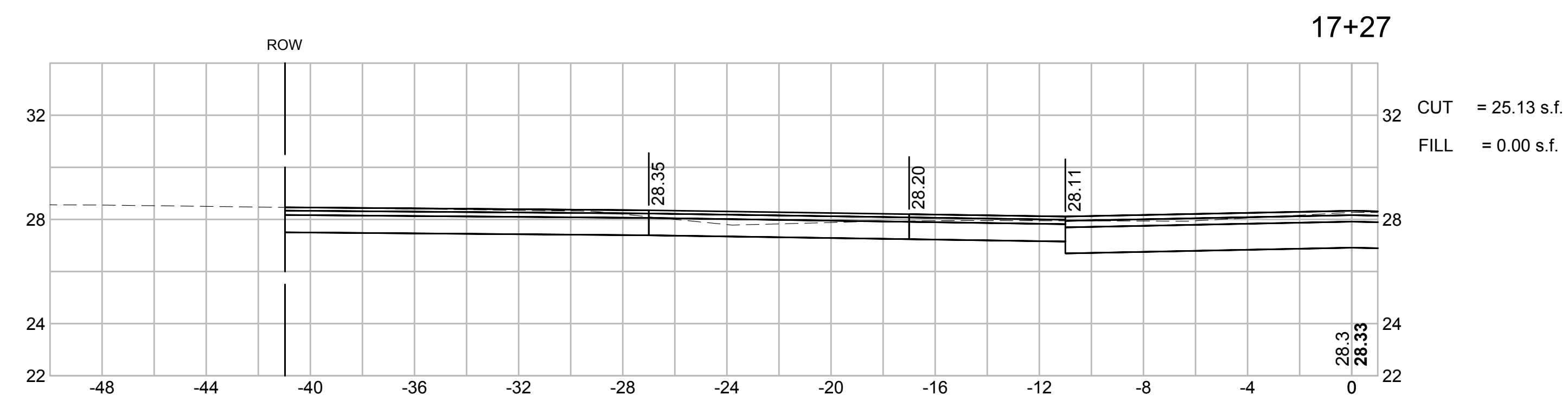
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	44 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

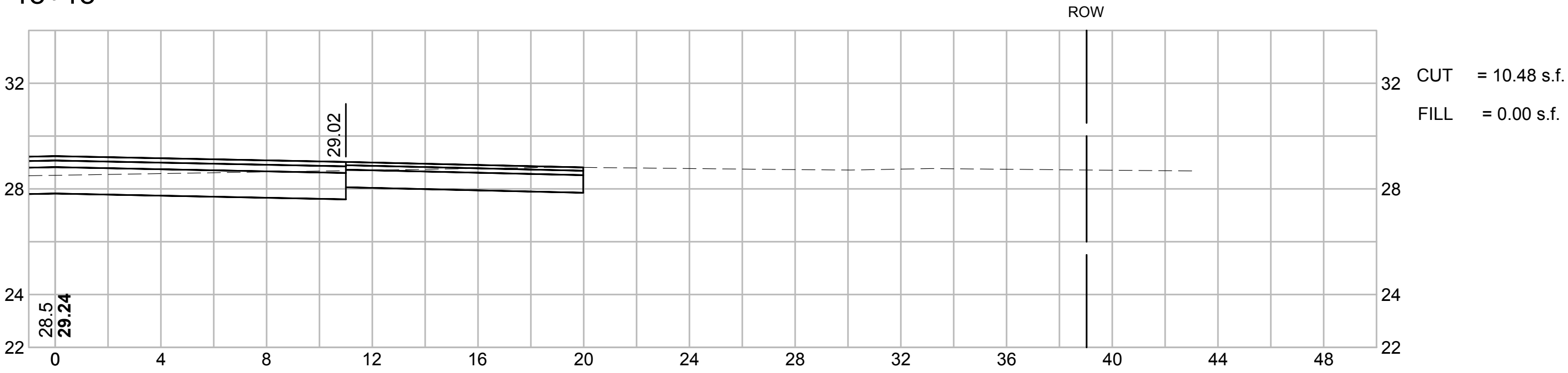
PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

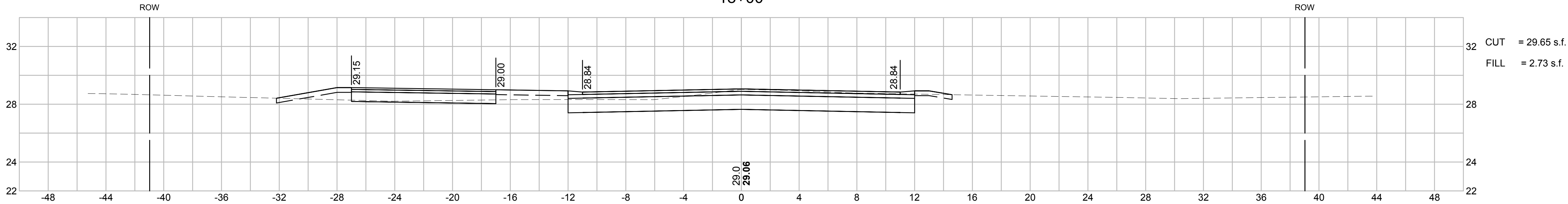
BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				45 OF 58

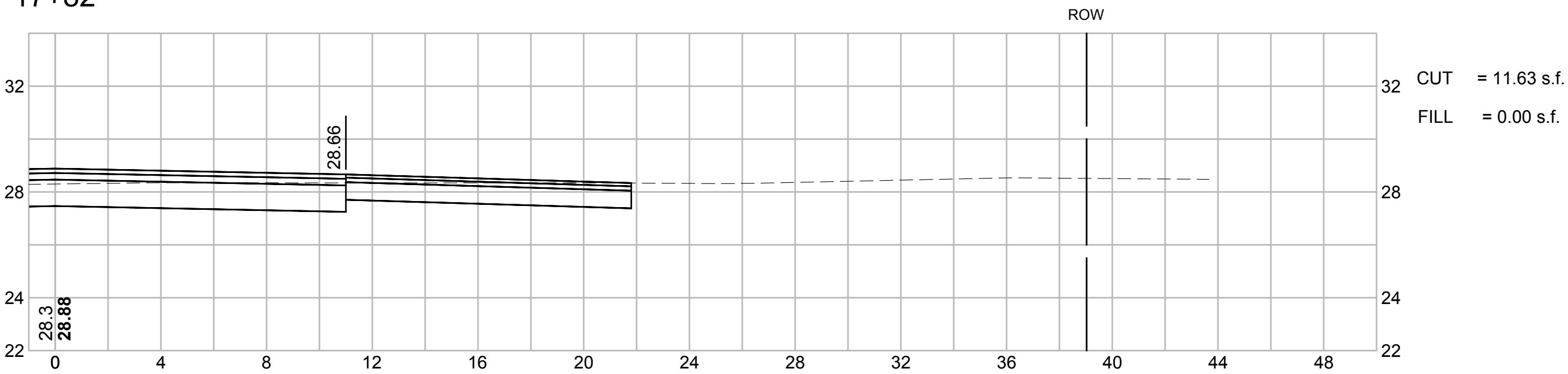
18+18



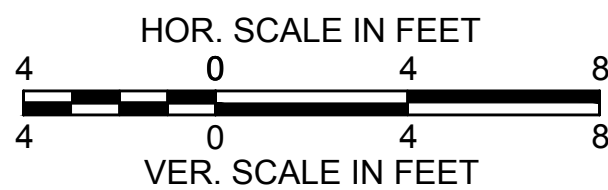
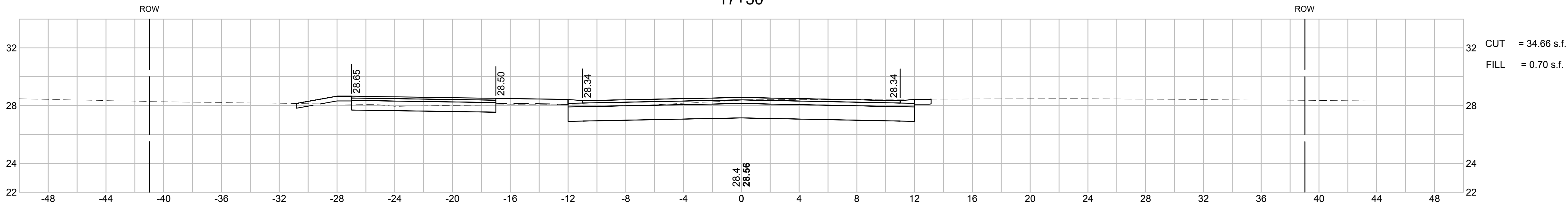
18+00



17+82



17+50



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

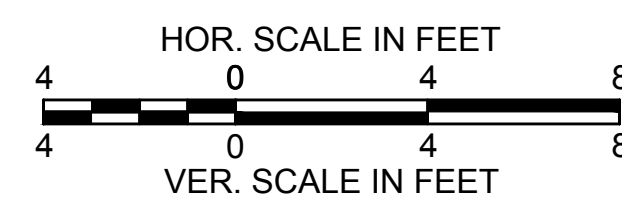
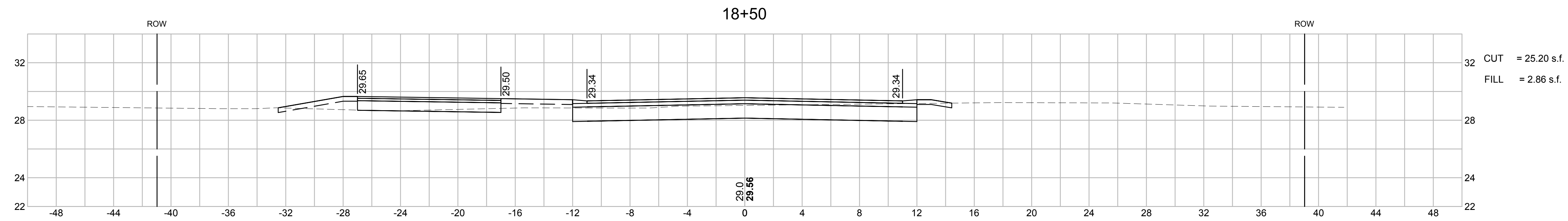
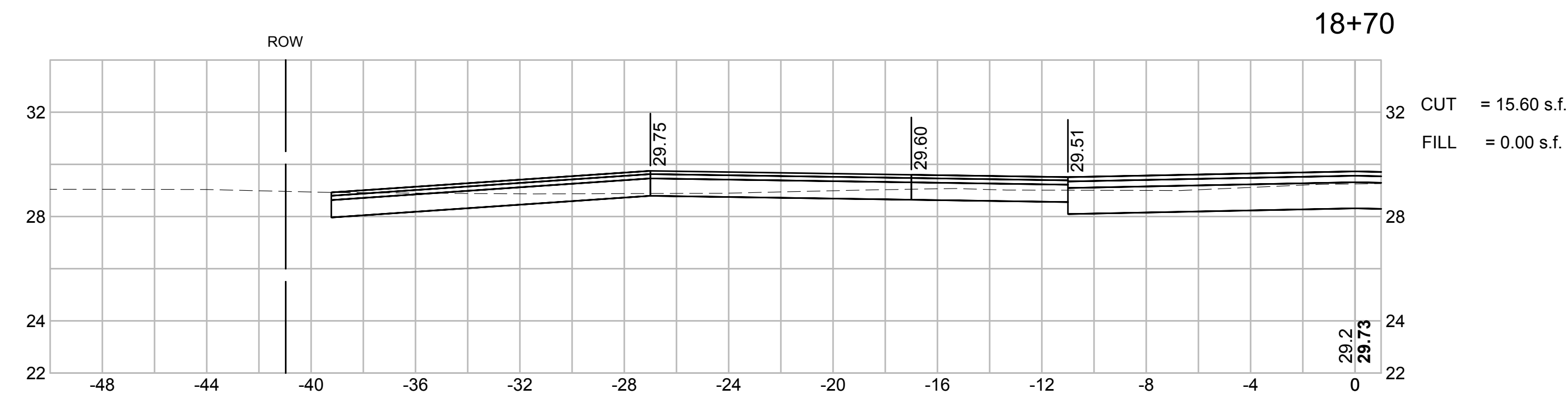
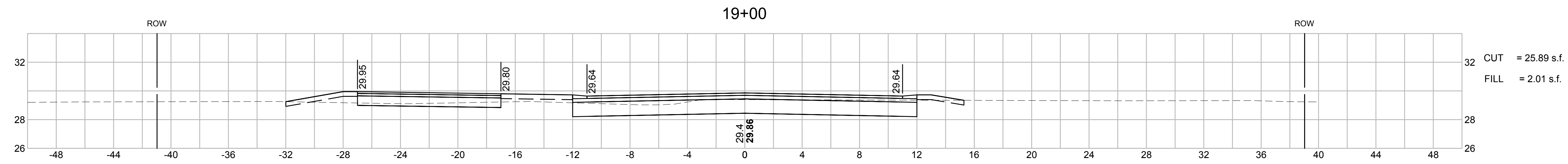
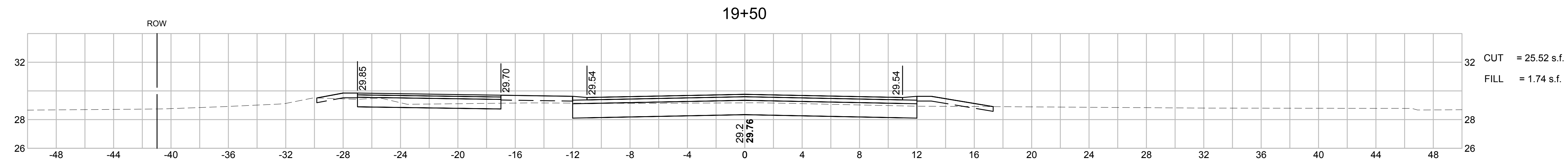
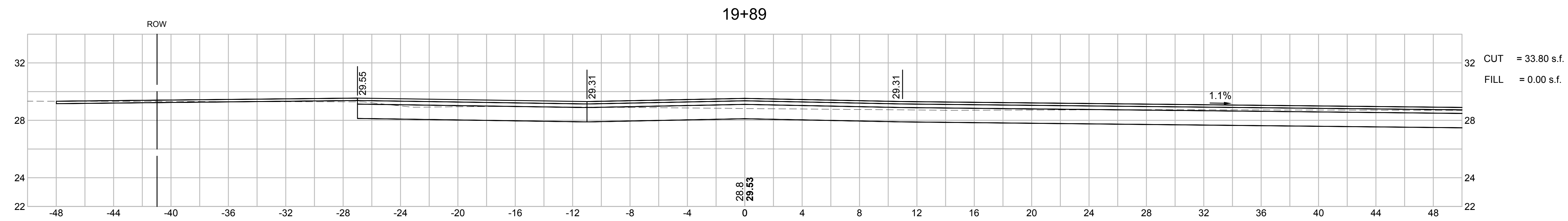
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	46 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

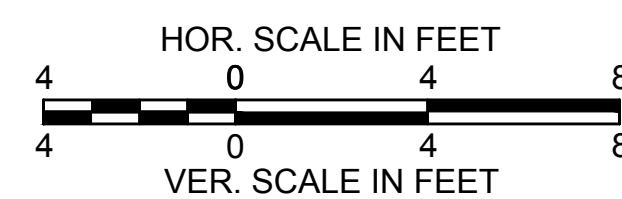
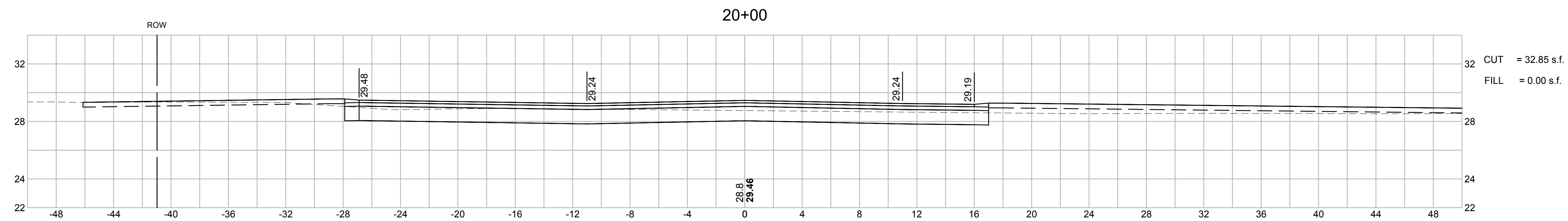
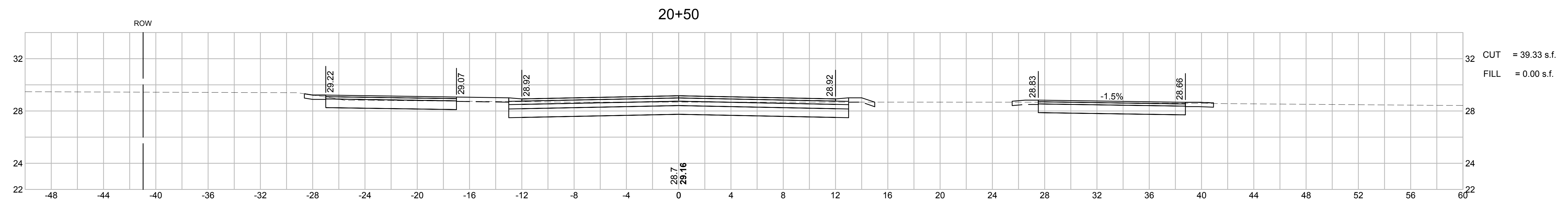
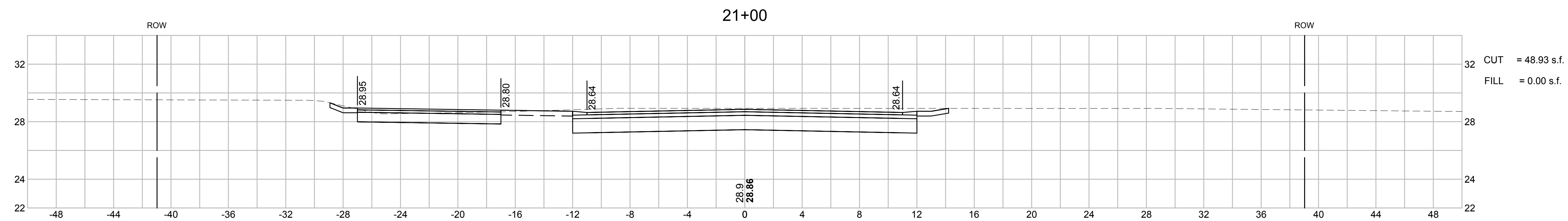
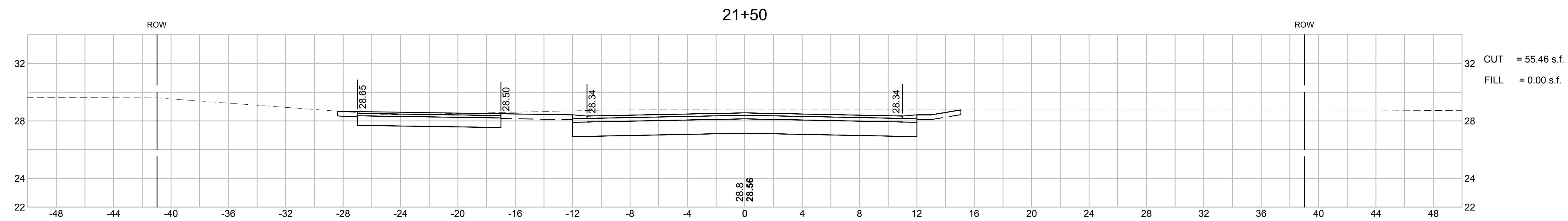
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				47 OF 58



GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

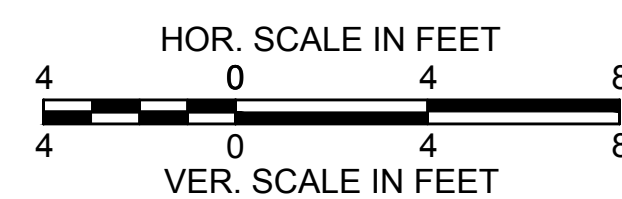
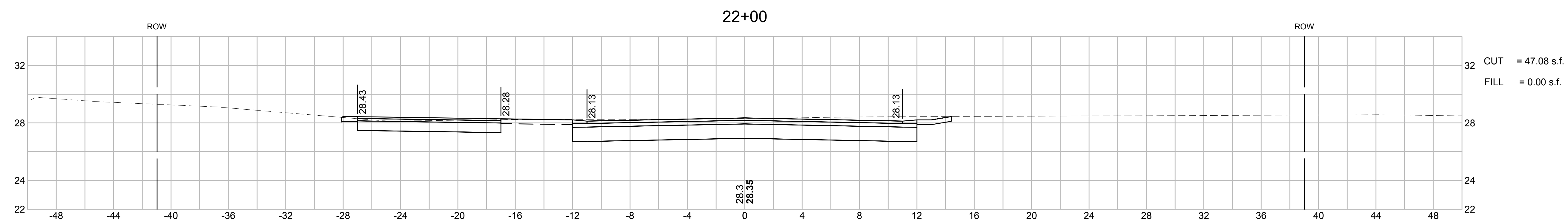
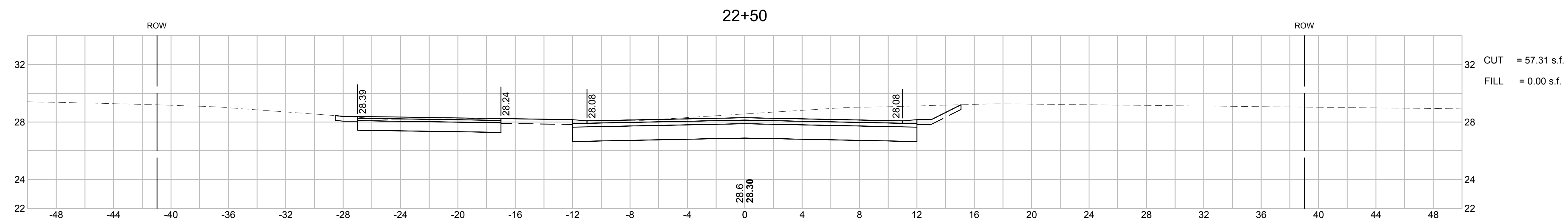
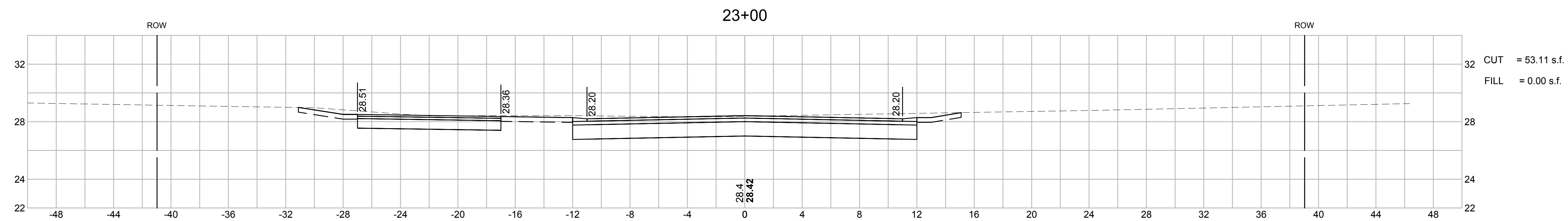
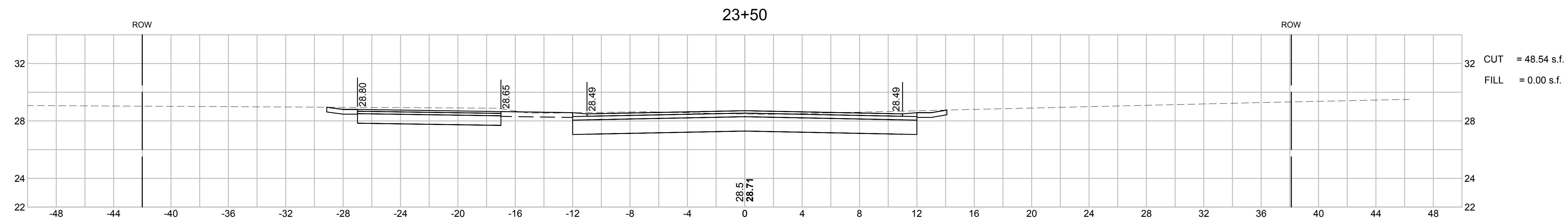
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				48 OF 58



GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

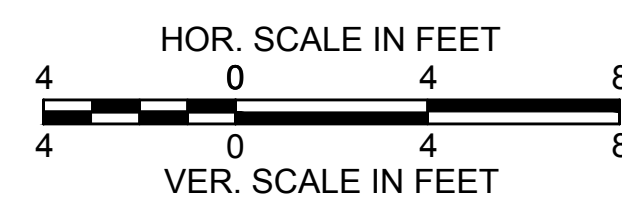
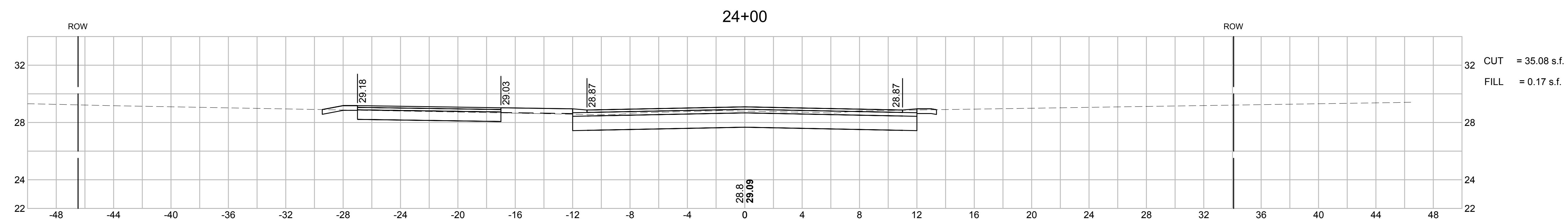
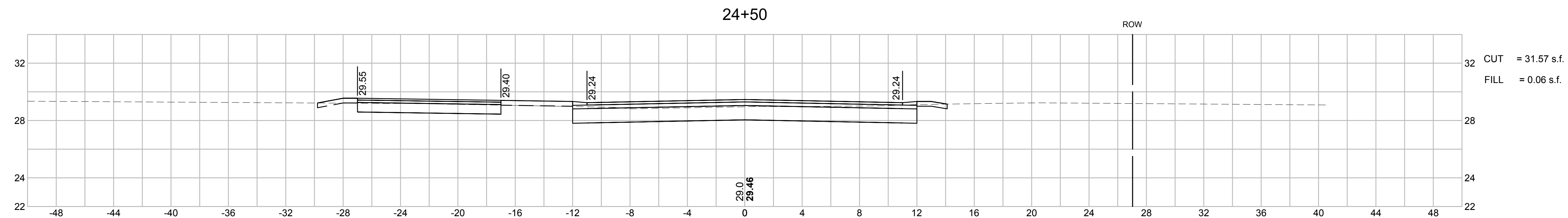
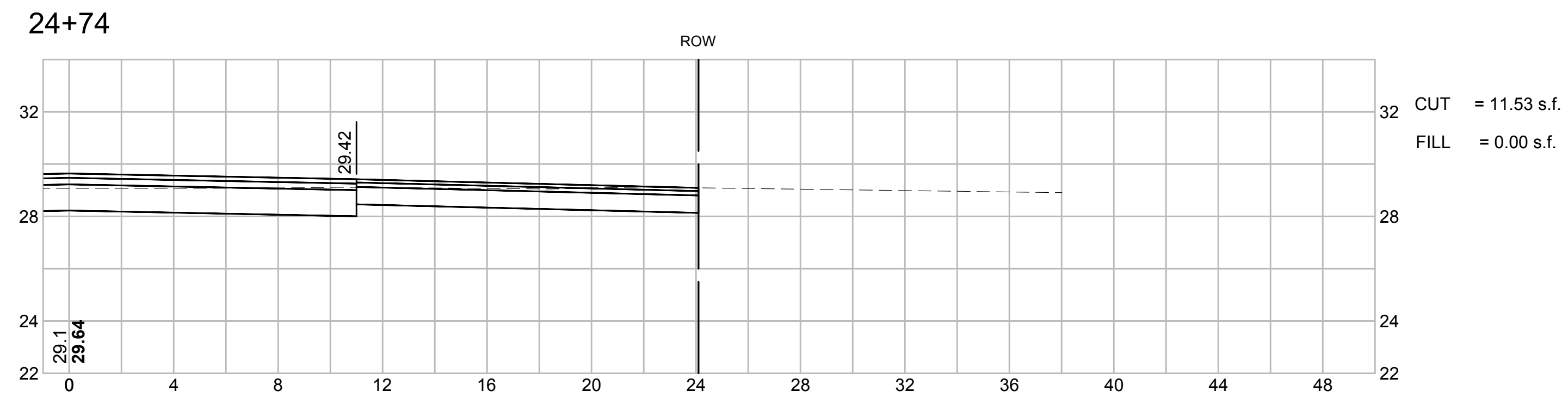
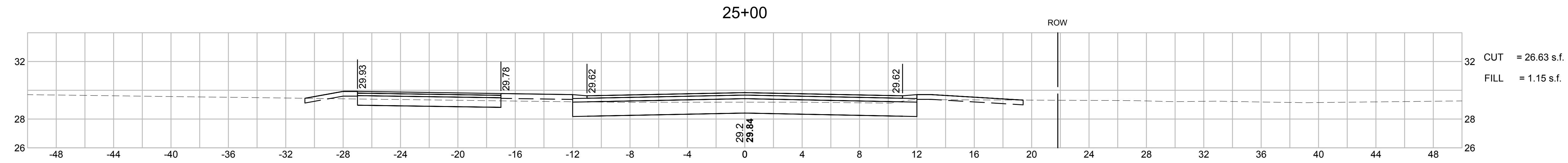
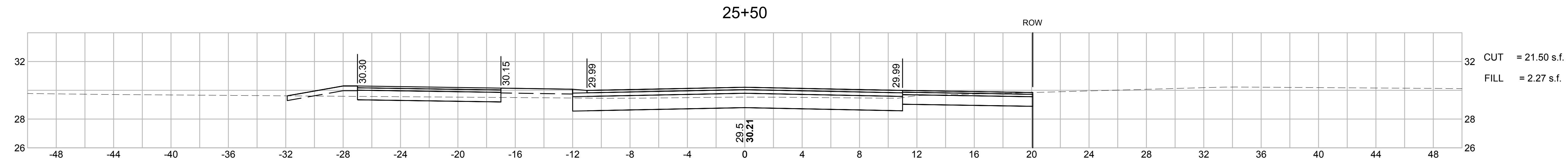
PREPARED FOR:

TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				49 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

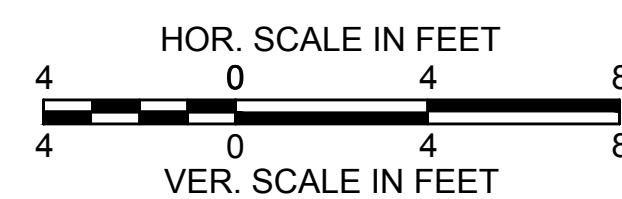
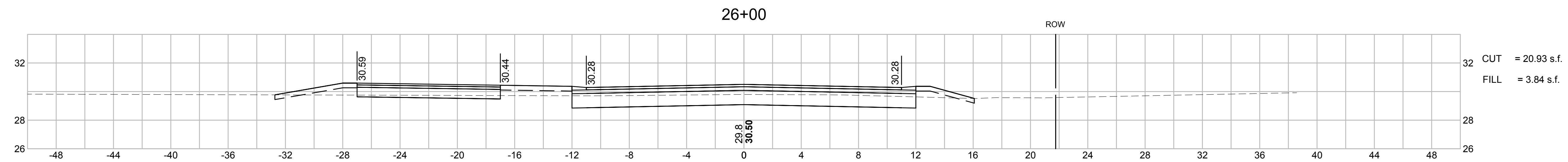
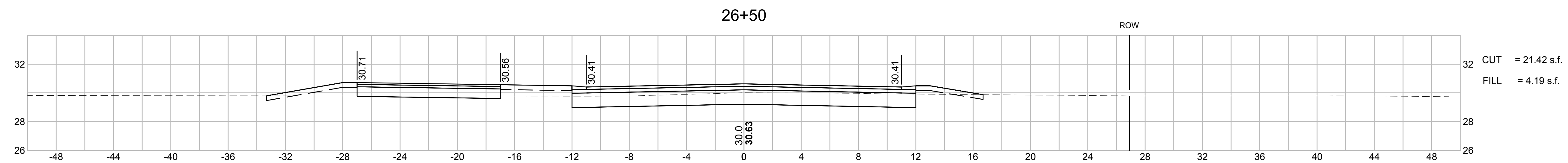
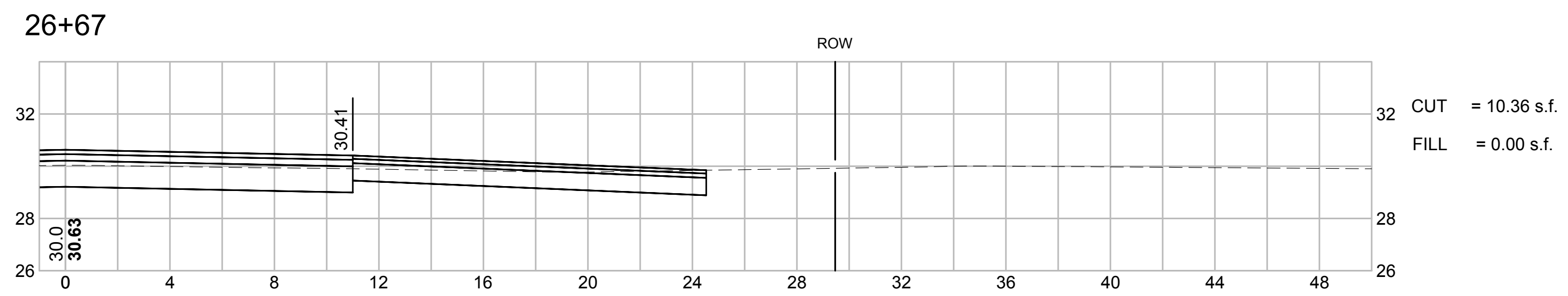
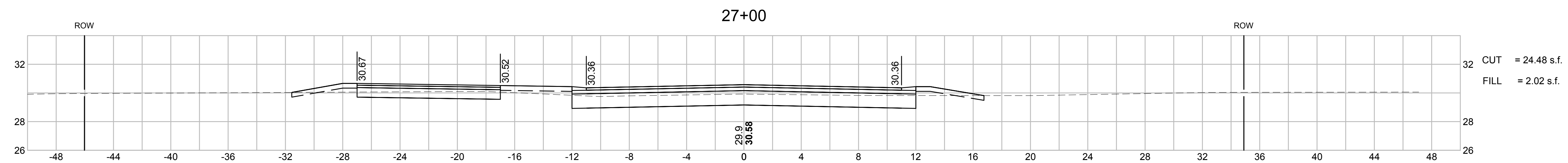
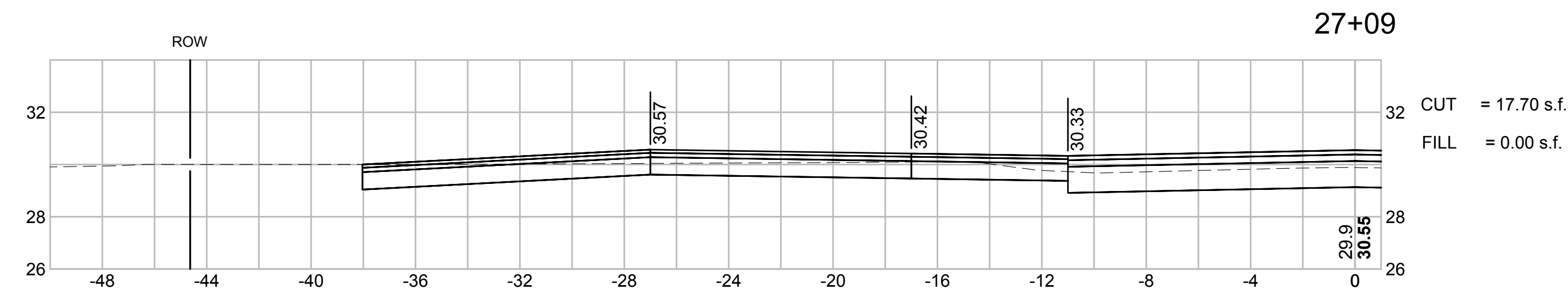
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				50 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

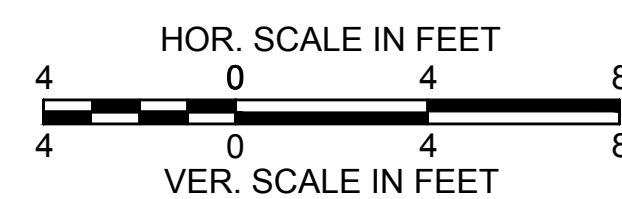
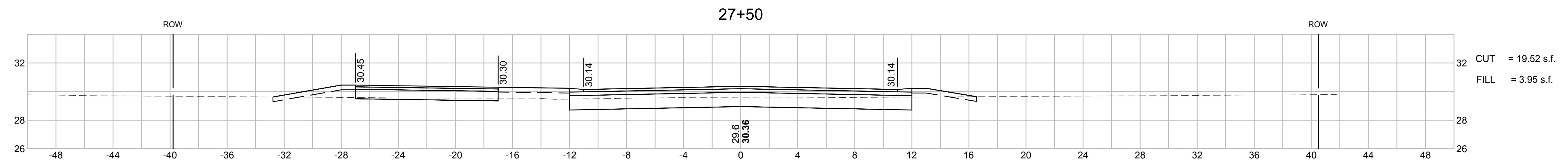
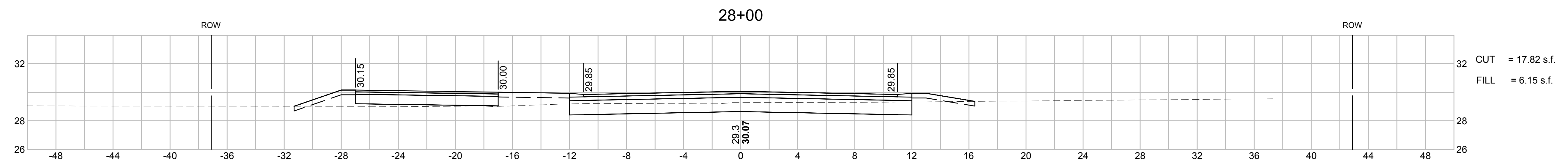
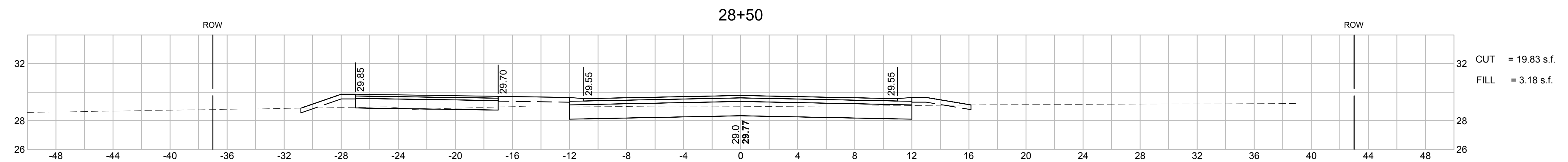
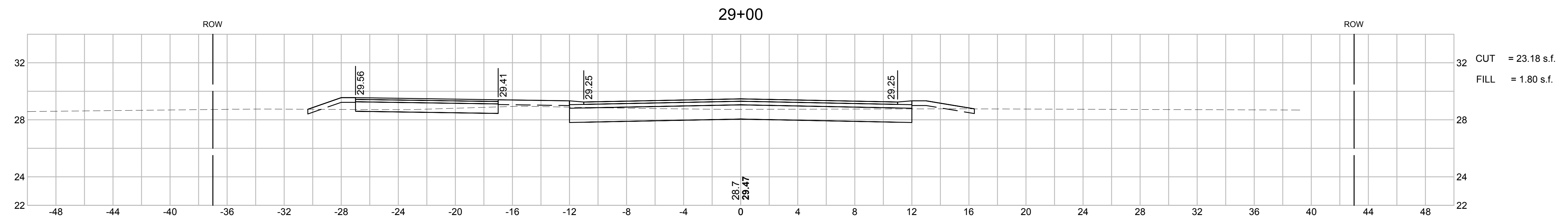
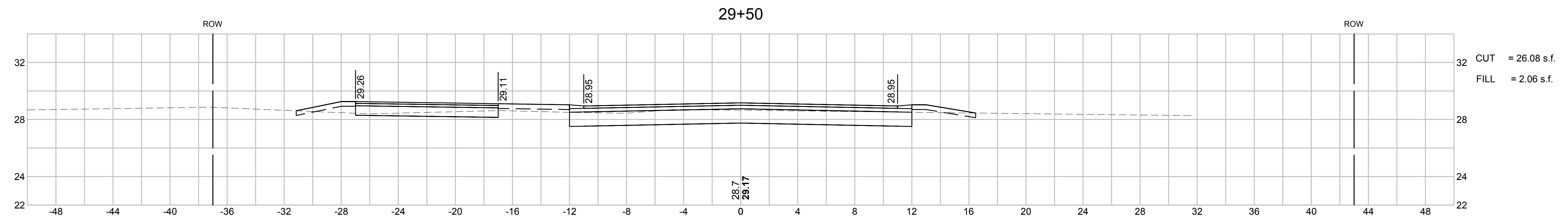
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				51 OF 58



GPI Greenman-Pedersen, Inc.

Engineers, Architects, Planners, Construction Engineers & Inspectors

181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887

Tel: (978) 570-2999 Fax: (978) 658-3044

Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:

BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

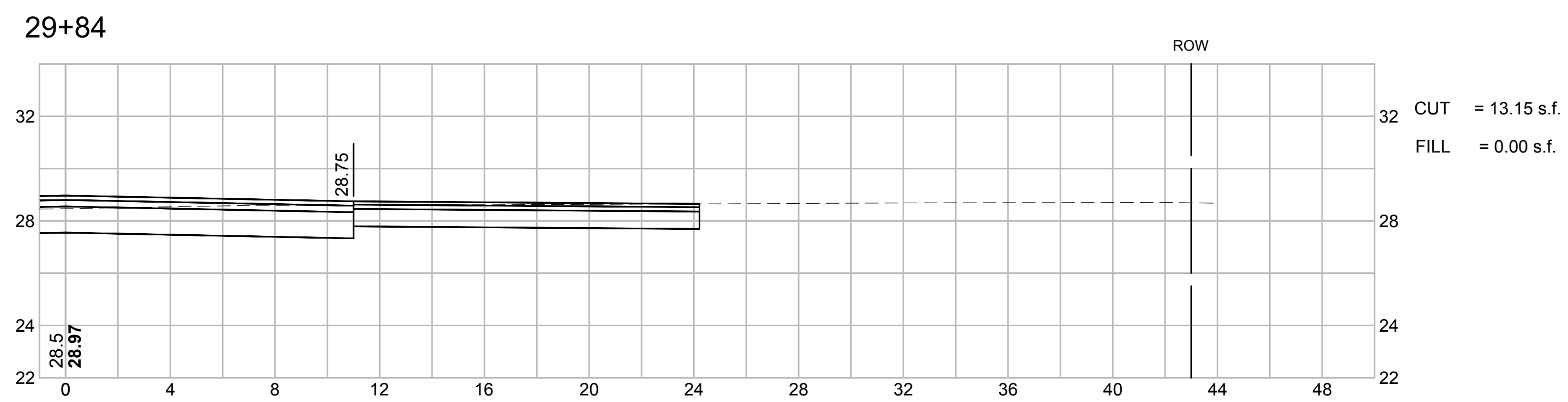
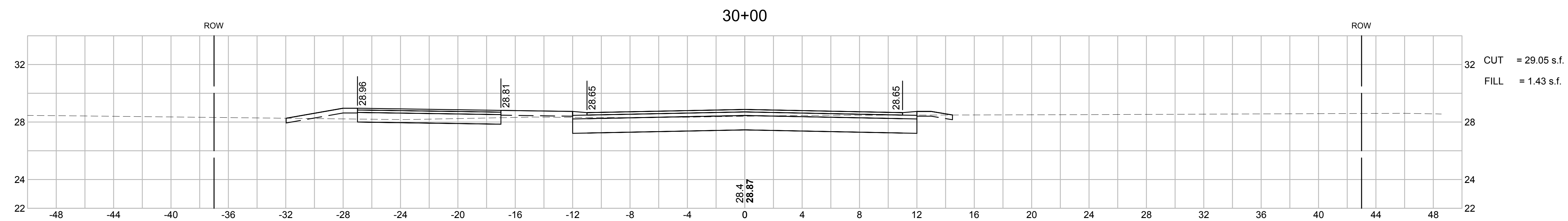
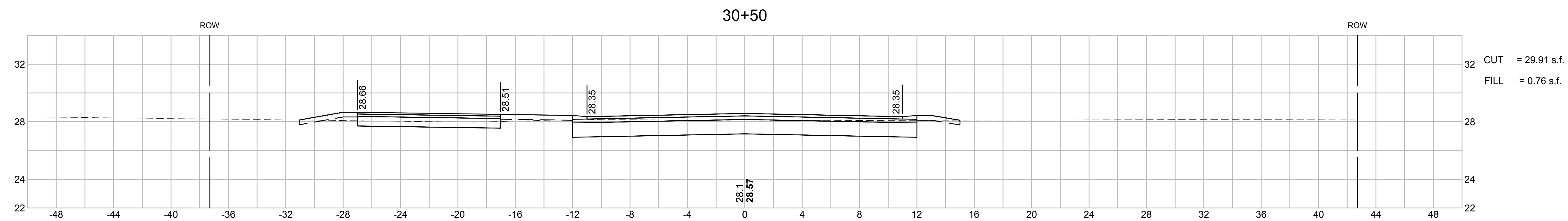
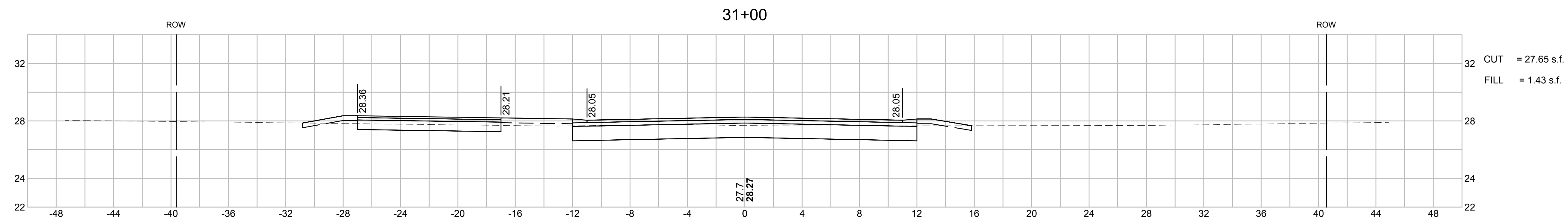
PREPARED FOR:

TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				52 OF 58



HOR. SCALE IN FEET
4 0 4 8
VER. SCALE IN FEET
4 0 4 8

GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT:
BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

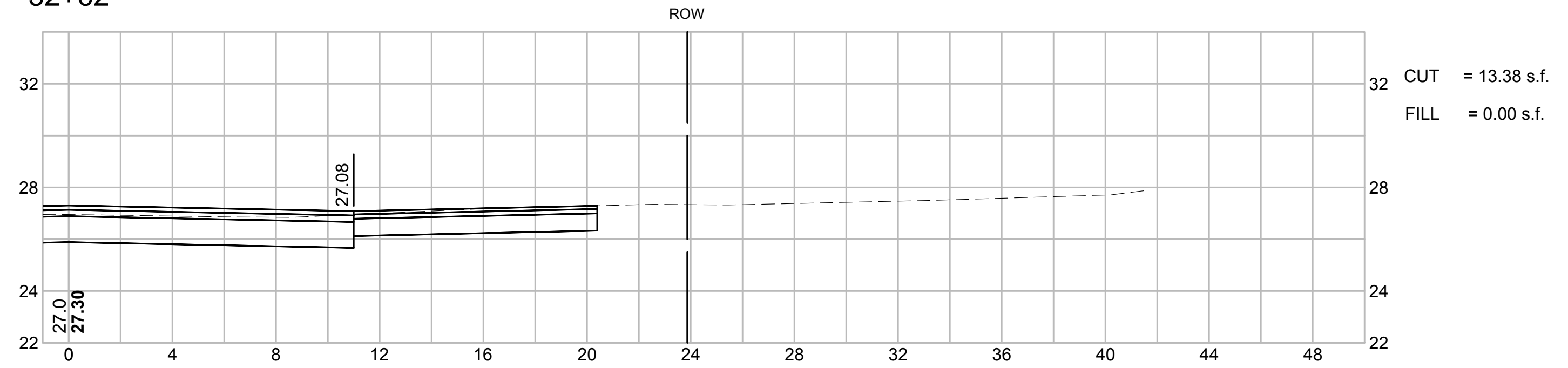
PREPARED FOR:
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

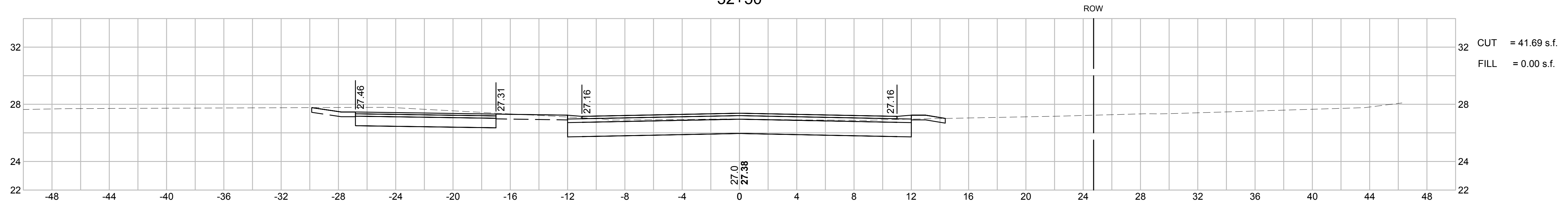
BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	53 OF 58

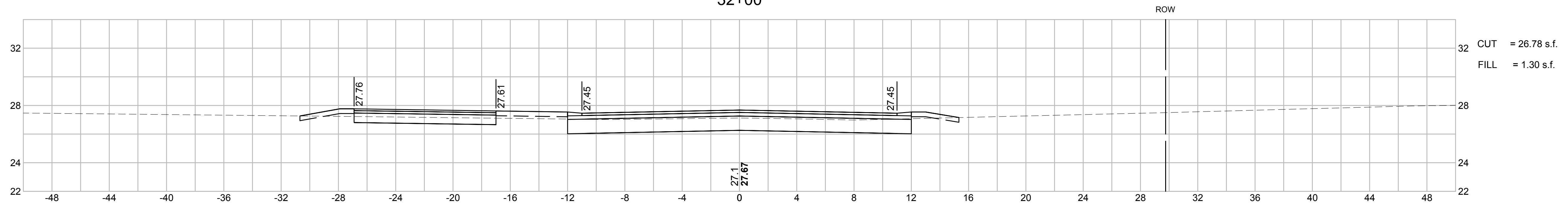
32+62



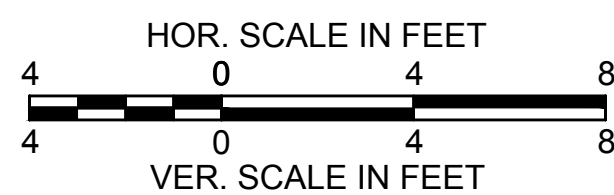
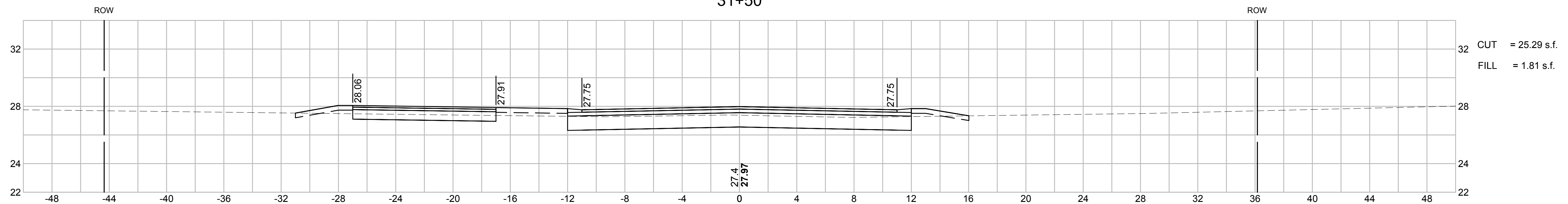
32+50



32+00



31+50



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

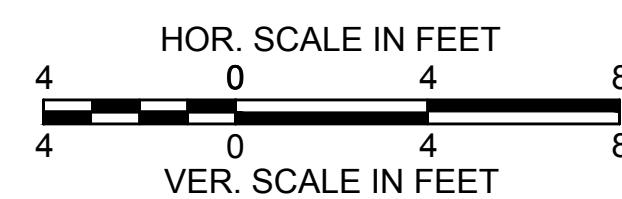
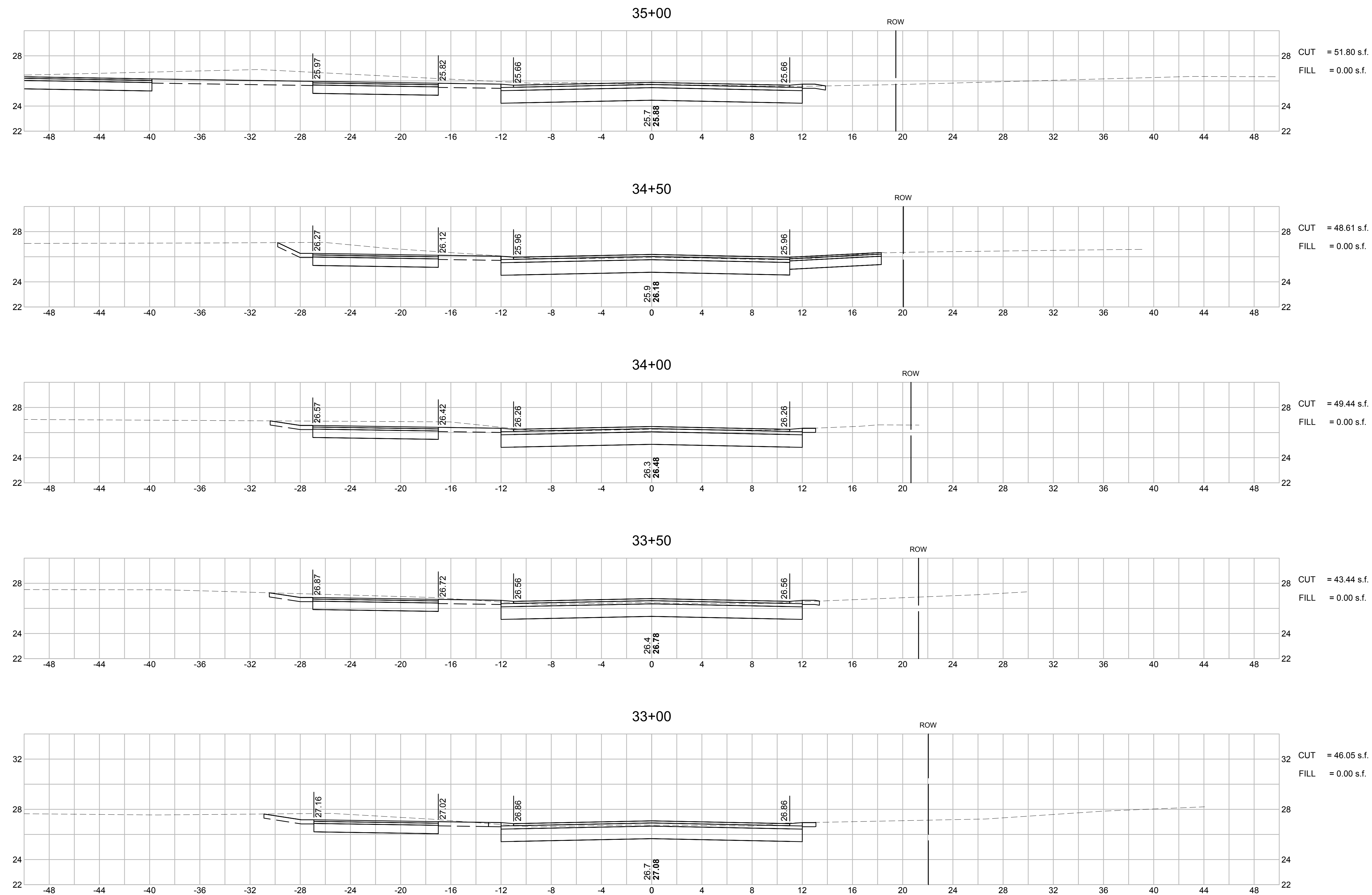
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				54 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

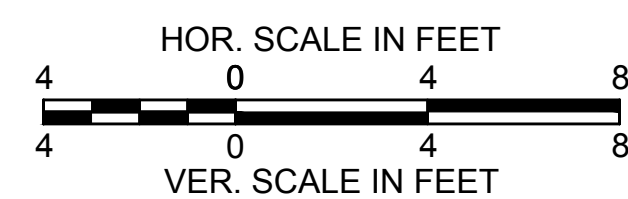
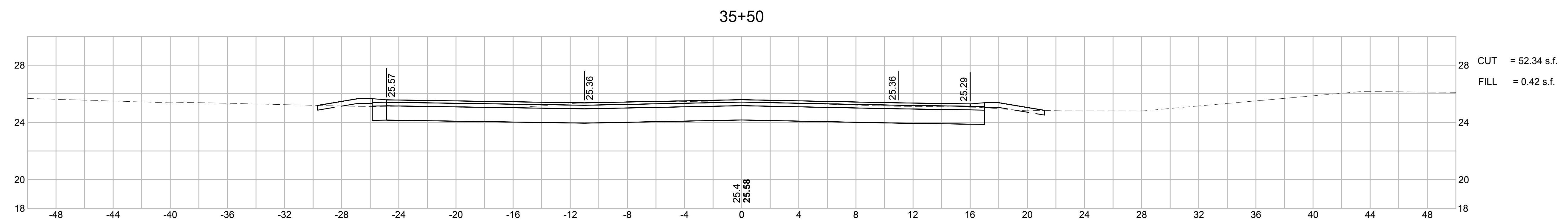
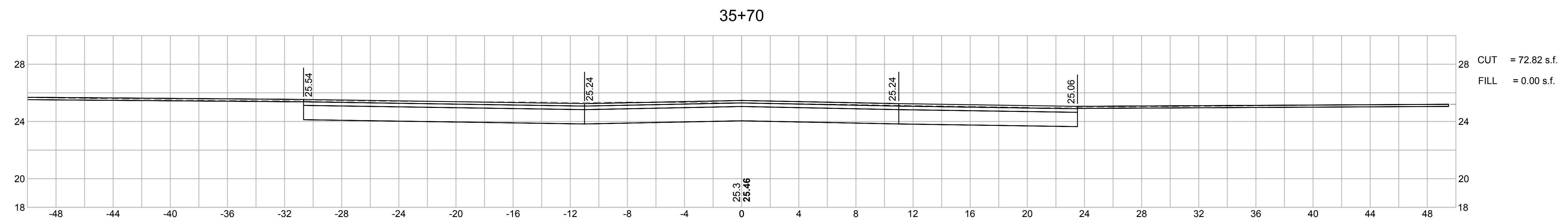
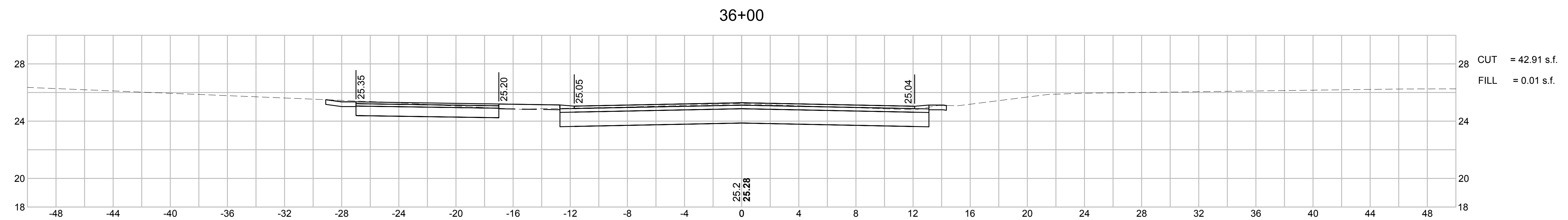
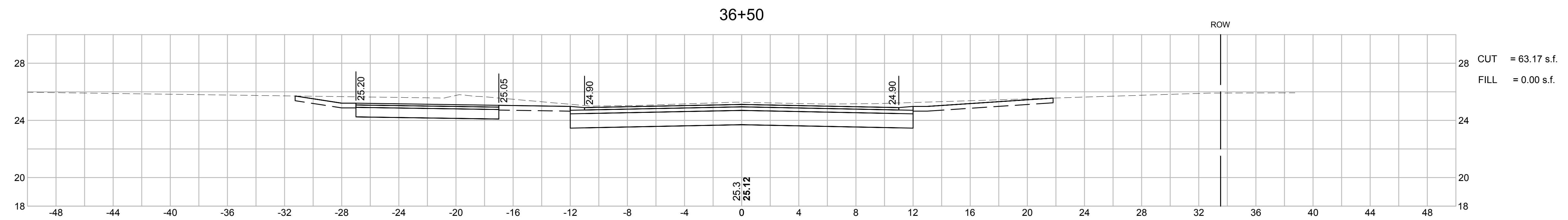
PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				55 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

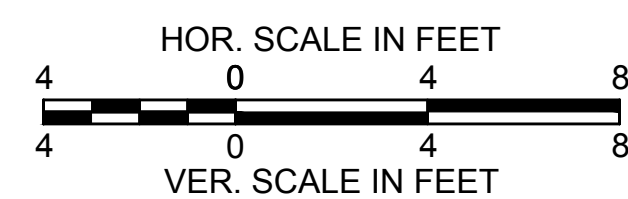
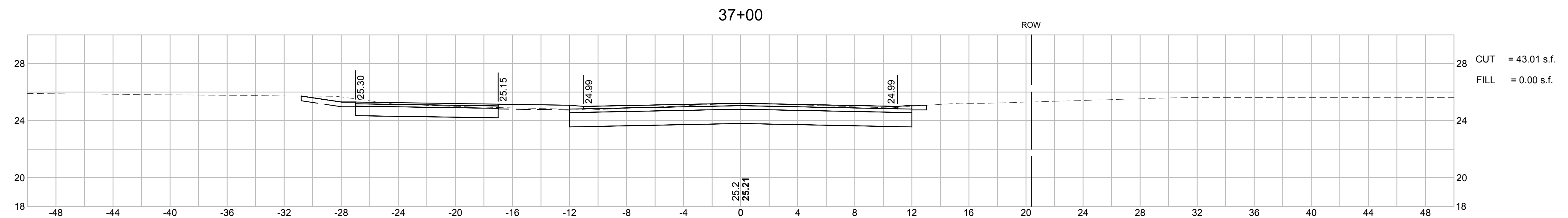
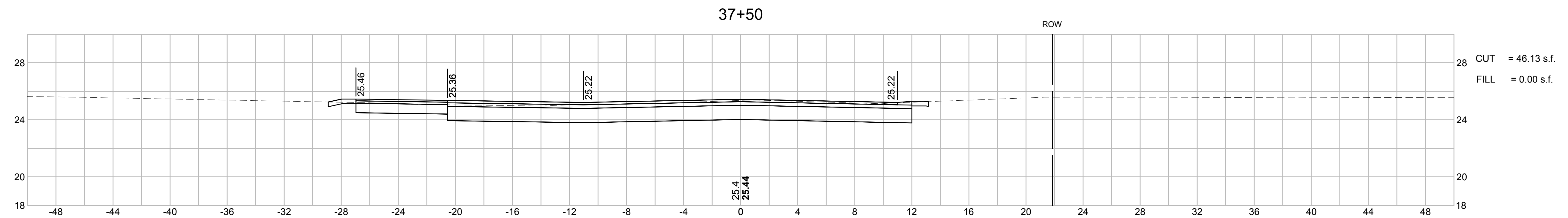
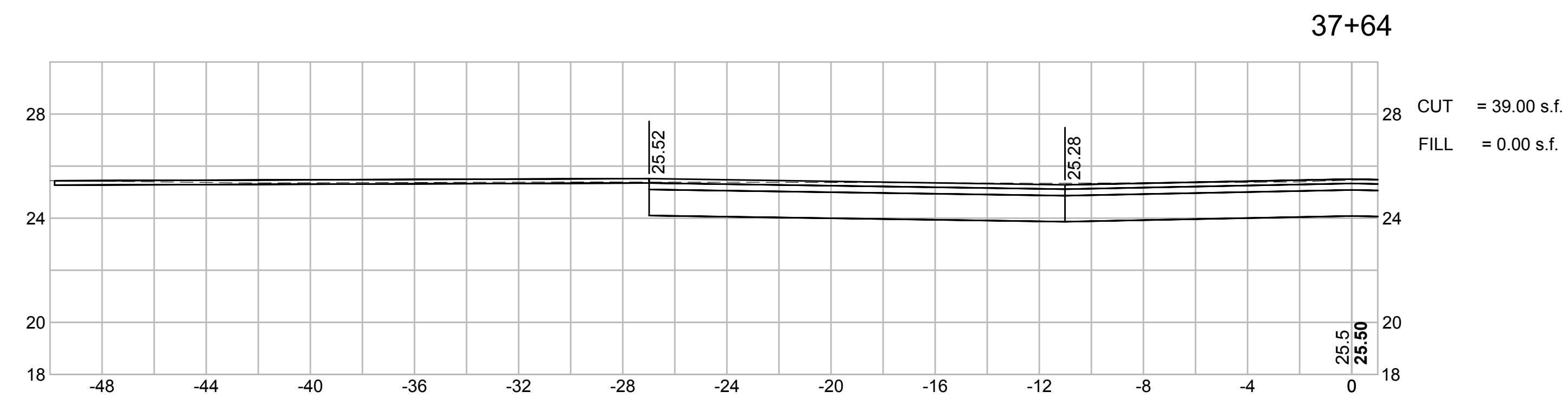
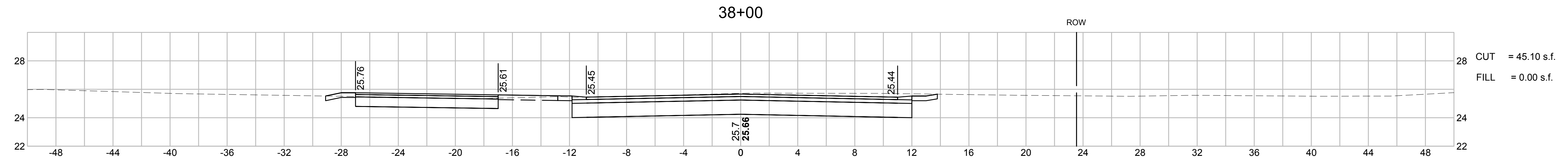
PROJECT:
BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE
NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				56 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

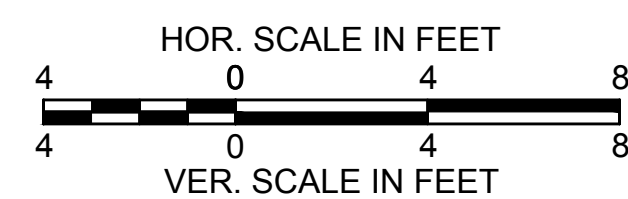
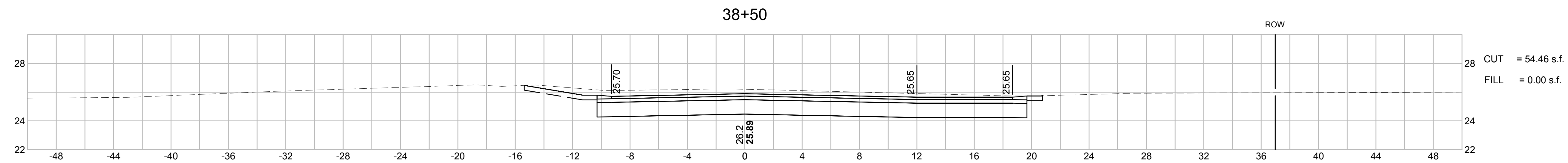
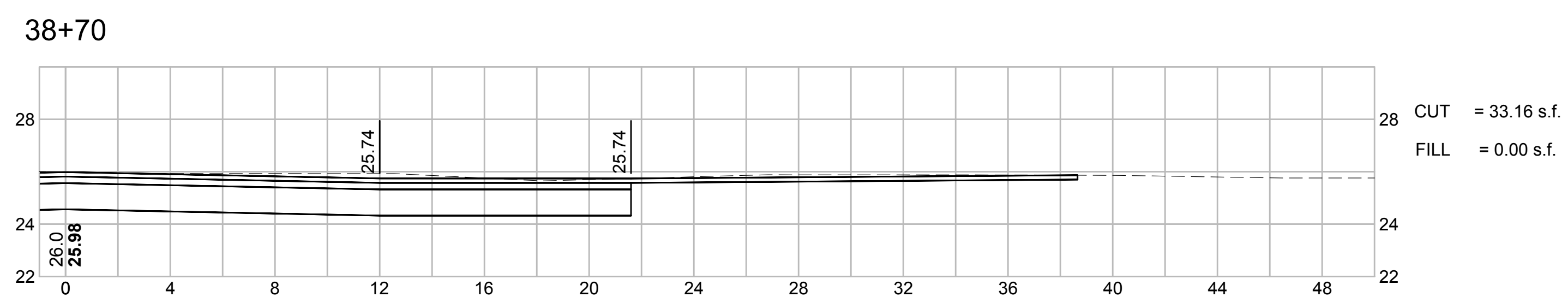
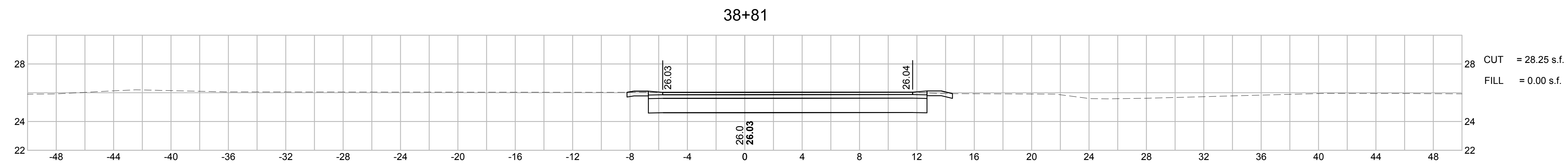
PROJECT:
BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR:
TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	
				57 OF 58



GPI Greenman-Pedersen, Inc.
Engineers, Architects, Planners, Construction Engineers & Inspectors
181 BALLARDVALE STREET, SUITE 202, WILMINGTON, MA 01887
Tel: (978) 570-2999 Fax: (978) 658-3044
Other Offices In: FL, MD, MI, NH, NJ, NY, OH, PA, VA, VT, WA <http://www.gpinet.com>

PROJECT: BOULEVARDE RECONSTRUCTION
NANTUCKET, MASSACHUSETTS

PREPARED FOR: TOWN OF NANTUCKET
16 BROAD STREET
NANTUCKET, MA

CROSS SECTIONS

BOULEVARDE NANTUCKET

NO.	REVISION	DATE	DESIGN/DRAWN BY:	SPM
			CHECK BY:	JFO
			DATE:	5/04/2016
			SCALE:	AS NOTED
			JOB NO.:	----
			FILE NAME:	XS
			DRAWING NO.:	58 OF 58

DOCUMENT 00715



INTERIM SUPPLEMENTAL SPECIFICATIONS

(English / Metric Units)

DATE: December 11, 2015

The 1988 *Standard Specifications for Highways and Bridges*, the 1995 *Standard Specifications for Highways and Bridges (Metric)* and the *Supplemental Specifications dated July 1, 2015 (combined English and Metric)* are amended by the following modifications, additions and deletions. These Interim Supplemental Specifications prevail over those published in the Standard Specifications and the Supplemental Specifications.

The MassDOT-Highway Specifications Committee has issued these Interim Supplemental Specifications for inclusion into each proposal until such time as they are approved as Standard Specifications.

Contractors are cautioned that these Interim Supplemental Specifications are periodically updated and may vary from project to project.

DIVISION I GENERAL REQUIREMENTS AND COVENANTS

SECTION 5.00 CONTROL OF WORK

SUBSECTION 5.11 Final Acceptance (Also see Subsections 7.02 and 9.05)

(page 19 English, page I.24 Metric) Replace second sentence of the first paragraph with the following:

If all construction provided for and contemplated by the Contract is found completed to the Engineer's satisfaction, that inspection shall constitute the final inspection and the Engineer shall in writing make acceptance of the physical work, which acceptance shall relieve the Contractor from further responsibility only with respect to the physical work.

(page 19 English, page I.24 Metric) Replace the last paragraph with the following:

After the Contractor has finished installing the controller and all other associated traffic signal control equipment and after the Contractor has set the signal equipment to operate as specified in the contract documents, the fine tuning, adjusting and testing period shall begin. During this period, the Contractor, under the direction of the Engineer and with the cooperation of the local community representatives, if applicable, will make necessary adjustments and tests to ensure safe and efficient operation of the equipment. This period shall not last for more than 30 days, and the contract completion date has taken this testing period into consideration. No request for final acceptance will be considered until successful completion of the testing period.

The cost of electrical energy consumed by the operation of traffic signals, highway lighting or other electrical devices during the construction, fine tuning, adjustment and testing of the devices will be borne by the owner of the existing device. In the case of an installation requiring a new electrical service, the cost of electrical energy consumed will be borne by the Contractor until final acceptance.

SECTION 8.00 PROSECUTION AND PROGRESS

SUBSECTION 8.10 Determination and Extension of Contract Time for Completion (Time Extensions).
(page 40 English, page I.51 Metric, page SUPPLEMENT C2015-22) Replace this subsection with the following:

A. General

It is an essential part of all contracts that contractors shall perform the Work fully, entirely and in an acceptable manner within the contract duration.

The contract duration is based upon the requirements of public convenience and the assumption that the Contractor will prosecute the Work efficiently and with the least possible delay, in accordance with the maximum allowable working time, as specified in the Contract.

The contract duration has been carefully considered and has been established for reasons of importance to the Department. The contract duration will be enforced and it is understood that the Contractor accepted this concept at the time of the submission of the bid. The timing of the Notice to Proceed (NTP) has been taken into account in the determination of the contract duration and the timing of the issuance of the NTP shall not, by itself, be a reason for a time extension.

An extension of contract time will be granted only if entitlement to a time extension has been clearly demonstrated to the satisfaction of the Engineer by a documented time entitlement analysis (TEA), performed in accordance with the requirements of Subsection 8.02.

B. Requests for Additional Contract Time (Time Extensions)

In response to a request for a time extension, an extension of contract time may be granted for demonstrated delays resulting from only one, or, in the case of concurrent delays, a combination of the following causes:

1. Extra Work

Each extra work order (EWO) proposal shall include an evaluation of the impact of the EWO on contract time, expressed in calendar days. If there is no impact to the contract time as a result of the EWO, the EWO shall indicate this by stating that zero calendar days of additional time is being requested. The need for a time extension as a result of the EWO must be clearly demonstrated by a documented TEA performed by the Contractor in accordance with the requirements of Subsection 8.02. A documented preliminary TEA supporting the EWO proposal shall be submitted to the Engineer as part of the EWO proposal. Also see Subsection 4.03 – *Extra Work and Subsection* and 4.05 – *Validity of Extra Work*.

SUBSECTION 8.10 (continued)

2. Department-Caused Delays

If any part of the Work is delayed or suspended by the Department, the Contractor will be granted a time extension to complete the Work or any portion of the Work only if entitlement to this time extension has been clearly demonstrated by a documented time entitlement analysis. Department-caused delays shall not include delays to or suspensions of the Work that result from the fault or negligence of the Contractor. Also see Subsection 8.05 – Claim for Delay or Suspension of the Work.

3. Increased Quantities

Increased quantities of work may be considered as the basis for a time extension only if the requirements of Subsection 4.06 - Increased or Decreased Contract Quantities are met. The time allowed for performance of the Work will be increased based on increased quantities only if entitlement to this time extension has been clearly demonstrated by a documented time entitlement analysis. A decrease in quantities shall also require a time entitlement analysis to determine if a deduction of contract time is warranted.

4. Delays Not Caused by Contractor Fault or Negligence

When delays occur due to reasonable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to: “Acts of God”; war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to any of the foregoing; acts of the Government; acts of the State or any political subdivision thereof; acts of other contracting parties over whose acts the Contractor has no control; fires; floods; epidemics; abnormal tides (not including Spring tides); severe coastal storms accompanied by high winds or abnormal tides; freezing of streams and harbors; abnormal time of Winter freezing or Spring thawing; interference from recreational boat traffic; use of beaches and recreational facilities for recreational purposes during the Summer season; abnormal ship docking and berthing; unanticipated use of wharves and storage sheds; strikes, except those caused by improper acts or omissions of the Contractor; extraordinary delays in delivery of materials caused by strikes, lockouts, wrecks, and/or freight embargoes; a time extension will be granted only if entitlement to a time extension has been clearly demonstrated by a documented time entitlement analysis.

An “Act of God” as used in this subsection is construed to mean an earthquake, flood, cyclone, hurricane, tornado, or other cataclysmic phenomenon of nature beyond the power of the Contractor to foresee and/or make preparations against. Additional consideration may be given to severe, abnormal flooding in local rivers and streams that has been reported as such by the National Weather Service. Rain, wind, snow, and/or other natural phenomena of normal intensity, based on National Weather Service reports, for the particular locality and for the particular season of the year in which the Work is being prosecuted, shall not be construed as an “Act of God” and no time extension will be granted for the delays resulting therefrom.

Within the scope of acts of the Government, consideration will be given to properly documented evidence that the Contractor has been delayed in obtaining any material or class of labor because of any assignment of preference ratings by the Federal Government or its agencies to defense contracts of any type.

5. Delays Caused by Public Service Corporations, Municipal Departments or Other Third Parties

If any part of the Work is delayed by public service corporations, municipal departments or other third parties, a time extension will be granted only if entitlement to a time extension has been clearly demonstrated by a documented time entitlement analysis. Also see Subsections 5.05 - *Cooperation by Contractor*, 5.06 - *Adjacent Contracts* and 8.04 - *Removal or Demolition of Buildings and Land Takings*.

C. Time Extension Determination

1. When the Contractor submits a request for a time extension, placing the Department on notice of a delay due to any of the causes listed in Subsection 8.10.B, it shall be submitted in writing to the Engineer within 15 calendar days after the start of the delay. No time extension will be granted if a request for a time extension is not filed within 15 calendar days after the start of the delay.

SUBSECTION 8.10 (continued)

A documented preliminary TEA supporting the request for a time extension and meeting the requirements of Subsection 8.02 shall be submitted to the Engineer no later than 15 calendar days after the request for a time extension is submitted to the Engineer or 30 calendar days after the start of the delay. A documented final TEA shall be submitted to the Engineer no later than 15 calendar days after the end of the delay. During the time between the preliminary and final TEA, the delay shall be documented in contract progress schedules submitted in accordance with the requirements of Subsection 8.02.

2. No time extension will be granted for any delay or any suspension of the Work due to the fault of the Contractor.
3. No time extension will be granted if the request for a time extension is based on any claim that the originally established contract duration was inadequate.
4. Time extensions will only be granted for delays, including concurrent delays, to activities affecting contract milestones, the contract completion date and/or other critical path activities as demonstrated to the satisfaction of the Engineer by a detailed time entitlement analysis that clearly states the number of calendar days of extra time being requested.
5. The probable slowdown or curtailment of work during inclement weather and winter months has been taken into consideration in determining the contract duration and therefore no time extension will be granted, except as defined in Subsection 8.10.B.4.
6. Any work restriction related to weather, permit conditions, community accommodation, traffic or any other restriction specified in the Contract or reasonably expected for the particular locality and for the particular season of the year in which the Work is being prosecuted must be considered in the analysis of each individual time extension and shall not be considered, in itself, justification for an extension of time.
7. Any time entitlement analysis prepared for the purpose of requesting a time extension shall clearly indicate any proposed overtime hours or additional shifts that are incorporated in the schedule. The Engineer shall have final approval over the use of overtime hours and additional shifts and shall have the right to require that overtime hours and/or additional shifts be used to minimize the duration of time extensions if it is determined to be in best interest of the Department to do so.

D. Disputes

Any dispute regarding whether or not a time entitlement analysis demonstrates entitlement to a time extension, the number of days granted in a time extension or any other question of fact arising under this subsection shall be determined by the Engineer.

The Contractor may dispute a determination by the Engineer by filing a claim notice within 14 calendar days after the Contractor's request for additional time has been denied or if the Contractor does not accept the number of days granted in a time extension. The Contractor's claim notice shall include a time entitlement analysis that sufficiently explains the basis of the time-related claim. Failure to submit the required time entitlement analysis with the claim notice shall result in denial of the Contractor's claim.

DIVISION II CONSTRUCTION DETAILS

SECTION 140 EXCAVATION OF STRUCTURES

SUBSECTION 140.63 Drainage Structures Abandoned or Removed.

(page 67 English, II.19 Metric) Replace the second paragraph with the following;

Inlets and outlets of structures to be abandoned shall be plugged with masonry. The masonry plug shall conform to the requirements of Section 270. Upper portions of the masonry shall be removed to a depth of 3 feet below the finished grade at the location designated by the Engineer, and the structures shall be completely filled with selected excavated material placed in 150 millimeter layers and thoroughly compacted.

SUBSECTION 140.81 Basis of Payment.

(page 69 English, II.21 Metric) Replace the last two paragraphs with the following;

Drainage Structures Abandoned and Drainage Structures Removed will be paid for at the contract unit price each. Masonry plugs shall be incidental to the work.

SECTION 270 PIPES REMOVED AND RELAID OR STACKED

SUBSECTION 270.62 Masonry Plug for Pipe Ends.

(page SUPPLEMENT C2015-46) Replace this subsection with the following;

Masonry plugs shall consist of bricks and mortar to form a watertight seal at the end of the pipe being plugged. The thickness of the plug shall at least be equal to the inside diameter of the pipe being plugged.

SECTION 482 SAWCUTTING

SUBSECTION 482.81 Basis of Payment.

SUBSECTION 482.82 Payment Items.

(page SUPPLEMENT C2015-59) Revise these subsections to read as follows:

COMPENSATION

482.81 Basis of Payment.

Sawing pavement will be paid for at the respective contract unit prices per foot, which prices shall include all labor, materials and equipment necessary to perform the work.

Sawcutting will be paid separately when made in areas of full depth box widening.

Sawcuts made in existing pavement in areas of trenching for new conduit, in areas of new or reset curb, or trench limits for drainage/water work, will be included in the unit price under the respective items and will not be paid for separately under this item.

Asphalt emulsion tack coat will be paid for under Item 464 Asphalt Emulsion for Tack Coat.

SUBSECTION 482.81 and 482.82 (continued)**482.82 Payment Items.**

482.3	Sawcutting Asphalt Pavement	Foot
482.4	Sawcutting Portland Cement Concrete	Foot
482.5	Sawcutting Asphalt Pavement for Box Widening	Foot
464.	Asphalt Emulsion for Tack Coat	Gallon

**SECTION 660
METAL PIPE RAIL****SUBSECTION 660.40 General.**

(page 170 English) Delete Basic Lead Silico Chromate, Intermediate Paint, M7.02.06.

**SECTION 796
PAVEMENT MILLING MULCH UNDER GUARDRAIL****SUBSECTION 769.40 General.**

(page SUPPLEMENT C-2015-77) Replace this Subsection with the following:

Pavement milling mulch shall meet the requirements specified in Division III, M1.10.0.
The geotextile fabric shall conform to M9.50.0 for Stabilization Fabric.

**SECTION 850
TRAFFIC CONTROLS FOR CONSTRUCTION AND
MAINTENANCE OPERATIONS****SUBSECTION 850.45 Arrow Board.**

(page SUPPLEMENT C-2015-104) Delete the last sentence of this subsection:

SUBSECTION 850.47 Radar Detector Activator.

(page SUPPLEMENT C-2015-104) Delete this entire subsection:

SUBSECTION 850.53 Portable Changeable Message Sign.

(page SUPPLEMENT C-2015-105) Replace the first paragraph with the following:

The Portable Changeable Message Sign shall be capable of performing all functions at ambient temperatures ranging from -31° to 165°F (-35 to 74°C). There shall be no degradation of operation due to fog, rain or snow.

SUBSECTION 850.81 Basis of Payment.

(page SUPPLEMENT C-2015-114) Replace the second paragraph of the page with the following:

Arrow Boards will be paid for at the contract unit price per day which shall include full compensation for furnishing, positioning, repositioning, and removing Arrow Boards as directed by the Engineer.

(page SUPPLEMENT C-2015-115) Replace the first paragraph of the page with the following:

Portable Changeable Message Signs will be paid for at the contract unit price per day which shall provide full compensation for furnishing, positioning, repositioning, and removing Portable Changeable Message Signs as specified or as directed by the Engineer.

SECTION 860

REFLECTORIZED PAVEMENT MARKINGS

SUBSECTION 860.60 Equipment.

(page 266 English, II.232 Metric) Replace this subsection with the following;

860.60 Equipment.

All equipment used for the application of pavement markings shall be approved by the Engineer and shall be of standard commercial manufacture. All equipment and devices necessary for the protection of the pavement marking and the traveling public shall be approved by the Engineer. The pavement marking equipment shall be operated in accordance with the manufacturer's recommendations.

Truck mounted equipment shall be used for the application of pavement markings except in such cases where in the Engineer's judgment travel will be unreasonably delayed and/or the quality of the work performed by the machine is unsatisfactory.

The Contractor shall supply the following equipment for each pavement marking operation;

- 1) infrared pistol thermometer meeting the requirements of Section 460.60
- 2) digital thickness gauge for measuring the thickness of thermoplastic lines
- 3) wet film thickness gauges for painted lines.
- 4) a retroreflectometer with certification of calibration within the last 6 months.

The above equipment shall remain the property of the Contractor upon completion of the project.

SUBSECTION 860.82 Payment Items.

(page 268 English, page II.234 Metric, page SUPPLEMENT C2015-117) Replace this subsection with the following:

860.106	6 Inch ReflectORIZED White Line (Painted)	Foot
860.112	12 Inch ReflectORIZED White Line (Painted)	Foot
861.106	6 Inch ReflectORIZED Yellow Line (Painted)	Foot
861.112	12 Inch ReflectORIZED Yellow Line (Painted)	Foot
864.	Pavement Arrow ReflectORIZED White (Painted)	Square Foot
864.01	Pavement Arrow and Legends ReflectORIZED White – Inlay Tape	Square Foot
864.02	Pavement Arrow and Legends - Tape	Square Foot
864.04	Pavement Arrows and Legends ReflectORIZED White (Thermoplastic)	Square Foot
866.106	6 Inch ReflectORIZED White Line (Thermoplastic)	Foot
866.112	12 Inch ReflectORIZED White Line (Thermoplastic)	Foot
867.106	6 Inch ReflectORIZED Yellow Line (Thermoplastic)	Foot
867.112	12 Inch ReflectORIZED Yellow Line (Thermoplastic)	Foot

**SPECIAL PROVISIONS TO THE
MASSACHUSETTS HIGHWAY DEPARTMENT
STANDARD AND SUPPLEMENTAL SPECIFICATIONS**

DIVISION I

1. Location and Work to be Done

The work under this Contract consists of the improvements to Boulevard in the Town of Nantucket, MA, including full depth roadway construction, pavement milling and overlay, pavement milling and overlay, spreading loam borrow and seed, pavement markings and signing, temporary traffic control, and other street improvements. The project limits include Boulevard from and including its intersection with Surfside Road to Clifford Street, a distance of approximately 4,560 feet.

The location, general characteristics, and principal details of the Work are indicated on plans entitled: **“Improvement of Boulevard in the Town of Nantucket, Nantucket County”** prepared by Greenman-Pedersen, Inc.

The plans also detail the construction of a shared use path noted as “Not In Contract”. The Town has plans to construct this path in the future pending resolution of utility relocations. All other work shown on the plans is included in the Contract.

All work done under this Contract shall be in conformance with the Massachusetts Highway Department’s *Standard Specifications for Highways and Bridges* dated 1988 and the English *Supplemental Specifications* dated July 1, 2015; the 2014 MassDOT *Construction Standard Details*; the 2015 Overhead Signal Structure and Foundation Standard Drawings; MassDOT Traffic Management Plans and Detail Drawings; the 2009 *Manual on Uniform Traffic Control Devices* with Massachusetts Amendments; the 1968 *Standard Drawings for Traffic Signals and Highway Lighting*; the latest edition of the *American Standard for Nursery Stock*; the Plans, and these Contract Documents.

Additional drawings showing details in accordance with which the Work is to be done may be furnished by addendum from time to time during the bidding period by the Owner or its Architect/Engineer, and shall then become a part of the Contract Documents.

The Contractor shall furnish all labor, services, materials, equipment, plant, machinery, apparatus, appliances, tools, supplies, and all other things necessary to do all work required for the completion of each item of the Work and as herein specified.

The Work to be done and paid for under any item shall not be limited to the exact extent mentioned or described but shall include all incidental work necessary or customarily done for the completion of that item.

2. Definitions Used in These Special Provisions

The “Municipality” and the “Town” shall mean the Town of Nantucket, the municipality in which the Contract work is to be performed.

“MassDOT”, “Massachusetts Highway Department” and “MassHighway” shall mean the Massachusetts Department of Transportation – Highway Division.

“Engineer” shall mean the authorized representative of the Town of Nantucket.

3. Schedule of Operations

A Pre-Construction Conference will be held at a time and place to be set following award of the Contract. At that time, the Contractor will be required to submit a plan showing his schedule of operations. Present at this meeting will be representatives of the Town of Nantucket and public safety officials. The purpose of the meeting will be to enable the various agencies to offer suggestions to the Contractor concerning his proposed schedule in order that full cooperation may be reached between the Contractor and the various agencies.

4. Work Schedule

Work on this Project is restricted to a normal eight (8) hour day, five (5) day week, with the prime Contractor and all subcontractors working on the same shift. The work hours may be modified by the Town upon request of the Contractor.

No work shall be done from the Friday before Memorial Day to the Tuesday after Labor Day without prior approval from the Town.

No work shall be done on this contract on Saturdays, Sundays or Holidays without 48 hours notification to and permission from the Town.

5. Guarantee After Final Acceptance (Supplementing Section 2.13 of the Standard Specifications)

The Contractor shall, at his own expense, replace any work performed under this Contract found to be defective in workmanship, material, or manner of functioning within twelve (12) months from date of final acceptance of all the installations under this Contract.

6. Changed Conditions. (Subsection 4.04 of the Standard Specifications)

This Subsection is revised by deleting the two sequential paragraphs near the end that begin “The Contractor shall be estopped...” and “Any unit item price determined ...”.

7. Cooperation of the Contractor (Supplementing Subsection 5.05 of the Standard Specifications)

Agents of various public service, municipal and state agencies may be entering on the work site to remove existing facilities, to construct or place new facilities or to make alterations to existing facilities.

The Contractor shall perform the work in cooperation with the various agencies in a manner which causes the least interference with the operations of the aforementioned agencies and shall have no claim for delay which may be due, or result, from said work of these agents.

The Contractor shall cooperate with the various utility companies, public agencies and the Town, and provide access through the site if required for their work or to observe work in connection with this project that affects their respective properties, but all official orders and directives to the Contractor will be issued by the Town.

8. Concurrent Work by Others Within Project Limits (Supplementing Subsection 5.06 of the Standard Specifications)

Concurrent work may be in progress in the project area by the municipality, utility companies, another contractor hired by the Town, or other contractors hired by private parties. The Contractor is required to coordinate his activities with these parties.

The Contractor is required to coordinate work with the local utilities to adjust, rebuild, reset and or relocate all private utilities required by the Scope of Work. Relocation and/or resetting of all private utilities to new grades made necessary by the construction of this project will be accomplished by the respective utility companies.

No additional payment will be allowed for any disruption of work schedule caused by or required to coordinate work in this contract with work to be performed by others, as described above, or which may be encountered during the prosecution of the work.

9. Construction Staking (Supplementing Subsection 5.07 of the Standard Specifications)

The Contractor shall be responsible for all horizontal and vertical control necessary for the work. Prior to construction, the Contractor shall retain a qualified surveyor to establish horizontal and vertical control from the information given by the Engineer on the Plans and from record survey available from the Engineer and the Town. The elevation of existing structures to be tied into shall be confirmed or established. The Contractor shall perform all survey required for the work, and said work shall be considered incidental to the Contract.

The Contractor shall also be responsible for retaining a Professional Land Surveyor (PLS) for all survey required for the placement of new bounds, the removal and resetting of existing bounds, and any existing bounds to remain that have been displaced by the Contractor's operations. The cost of said work by the PLS shall be considered incidental to the various items of work.

10. Massachusetts Department of Environmental Protection File Number Sign (Supplementing Subsection 7.01 of the Standard Specifications)

This project may be subject to Massachusetts General Laws, Chapter 131, Section 40 as amended. Signs that may be required shall be in accordance with the latest MassDOT Construction Standards. All costs for the manufacture, erection, maintenance, moving, and removal of the signs shall be incidental to the Contract.

The Contractor's attention is directed to the fact that special conditions and other requirements may be imposed by the local Conservation Commission. It is the Contractor's responsibility to be aware of and comply with these conditions and requirements and plan his/her work and schedule accordingly. The Contractor is hereby notified that he/she will be responsible and held accountable for performing any/all work necessary to satisfy and comply with all local conservation requirements.

If field conditions and/or Contractor-proposed erection, demolition, storage, or other procedures not originally allowed by environmental permits require work to occur in or otherwise impact water or wetland resource areas, the Contractor is advised that no associated work can occur until all required environmental permits have been either amended or obtained allowing such work. The Contractor must notify the Engineer in writing at least 20 days prior to desired commencement of the proposed activity. All environmental submittals, including any contact with Local, State, or Federal environmental agencies, must be coordinated with the Engineer. The Contractor is expected to fully

cooperate with requests for information and provide same in a timely manner. The Contractor is further advised that the Town will not entertain a delay claim due to the time required to modify or obtain the environmental permits.

11. Environmental Protection

The Contractor shall operate only in those areas approved by the Engineer and shall provide protective measures called for in various Contract Items or at the direction of the Engineer. All protective measures shall be maintained by the Contractor until removal is approved by the Engineer or at the end of the Project.

The Contractor shall maintain all construction and storage areas free of debris and trash.

The Contractor shall be responsible for restoration of disturbed areas as provided for in the various items. Any damage to areas not approved by the Engineer shall be restored at the Contractor expense. Should the Contractor fail to make the necessary repairs, the Town may make such repairs and charge them against the Contractor.

Daily maintenance and fueling of equipment shall be conducted away from all wetland areas. The Contractor shall have sufficient materials on hand to control and clean up any spillage. In the event of an accidental spillage within any wetland area, the Contractor shall take immediate action to prevent contamination of wetland areas, and he shall cease operations and notify the Engineer. The cost of clean up of any contamination shall be the responsibility of the Contractor.

Maintenance and repair other than daily requirement shall be done off-site at the Contractor's own facility or service yard.

From time to time the site may be visited or inspected by Local, State or Federal agencies responsible for protection of the environment. The Contractor shall cooperate with the representatives and shall not hinder or impede their work.

All protective measures shall be paid for in the costs of the various items.

The Contractor shall provide for removal of dirt spilled from his trucks on existing pavement over which it is hauled or otherwise deposited whenever in the judgment of the Engineer the accumulation is sufficient to cause the formation of mud or dust or interfere with drainage.

Dust Control: Provide positive methods and apply dust control materials to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into the atmosphere.

The Contractor shall provide sanitary facilities for the use of workers at the site and shall insure that they are maintained in a clean condition. The contents shall be removed and disposed of in a satisfactory manner as the occasion requires. The sanitary conveniences shall be the obligation and responsibility of the Contractor.

12. Permits (Supplementing Subsection 7.03)

The Contractor shall be responsible for obtaining the Street Opening Permit from the Town and for obtaining and coordinating all other necessary permits. Any and all fees associated with these permits shall be considered to be incidental to the Contract.

The Contractor's attention is directed to the fact that the Scope of Work may be adjusted as a result of these permits and approvals.

13. Erosion and Sediment Control

Sediment and erosion control best management practices (BMPs) shall be installed prior to beginning any construction activities and shall remain in place throughout construction and until all disturbed areas are re-vegetated. Additional BMPs shall be installed wherever directed. The Engineer has the authority to limit the surface areas of erodible earth material exposed by excavation, borrow and fill, or any such operations. Such measures will involve the construction of staked straw bales, a settling basin/tank, silt fences, turbidity curtains, or other control devices or methods as necessary to control erosion and sedimentation.

The erosion and sediment control features installed by the Contractor shall be satisfactorily maintained by the Contractor until acceptance of the project.

In the event of conflict between these specifications and laws, rules, or regulations of local agencies, the more restrictive requirements shall apply.

If temporary erosion and sediment control measures are required due to the Contractor's negligence or carelessness, the control measures shall be performed by the Contractor at his own expense. Construction of temporary erosion and sediment control measures, which are not attributed to the Contractor's negligence, carelessness, or failure to install permanent controls, will be performed as shown on the Plans and/or as ordered by the Engineer.

Repeated failures by the Contractor to control erosion, pollution, and/or siltation, shall be cause for the Town to employ outside assistance or to use his own forces to provide the necessary corrective measures. The cost of such assistance plus project engineering costs will be charged to the Contractor and appropriate deductions made from the Contractor's monthly progress estimate.

Payment for temporary soil erosion and control work will be included under Item 767.12 in the Contract.

14. Public Safety and Convenience (Supplementing Subsection 7.09 of the Standard Specifications)

The Contractor shall provide necessary access for fire apparatus and other emergency vehicles through the work zone to all abutting properties at all times. Unless otherwise approved by the Town, one lane shall be open to provide access to abutting properties at all times during the execution of the work. The Contractor shall at all times provide access to public and private lots and alleys in the work area or arrange 24 hours in advance for disruption in access.

Before the start of work, the Contractor shall post all locations in compliance with the Manual of Uniform Traffic Control Devices (MUTCD) and the Temporary Traffic Control Plans in the Contract documents.

The Contractor shall familiarize himself with the provisions of the Manual of Uniform Traffic Control Devices Part VI Construction and Maintenance. During construction, the Contractor shall provide traffic warning devices that conform to the MUTCD in order to properly protect traffic and pedestrians from the Work. The Contractor shall be responsible for providing, positioning, repositioning, maintaining and removing signs through the course of the project as deemed necessary by the Town or the Engineer.

When it is deemed necessary by the Chief of Police that detail Police Officers are needed, they will be provided by the Contractor. The Town shall reimburse the Contractor without mark-up for the cost of the Police Detail upon presentation of the cancelled check. It is the Contractor's responsibility to cancel a Police Detail at a minimum of four hours in advance of the start of the shift if conditions so warrant. The Contractor shall not be reimbursed for Police Details if the Contractor fails to show for the job or if the Contractor fails to cancel the detail with adequate advance notice.

This provision of Police Details shall not relieve the Contractor of the responsibility of providing proper traffic control devices when operating adjacent to the roadway while it is open to the public. Any costs associated with these devices are the responsibility of the Contractor and shall be accounted for in the unit costs unless otherwise provided for.

The Contractor shall provide sufficient fencing, barricades and signage and otherwise provide for security around all excavations and stockpiles. Cost for these items shall be included in the unit costs for the items of work.

The above provisions represent minimal requirements for maintenance of traffic and safety and may be modified at the discretion of the Engineer.

If, at any time, in the judgment of the Engineer, the Work is not properly made safe in regard to public travel, persons on or about the Work, or public or private property, the Engineer shall have the right to order such safeguards to be erected and such precautions to be taken as he deems advisable, and the Contractor shall comply promptly with such orders. If, under such circumstances, the Contractor does not or cannot immediately put the work and the safeguard into proper and approved condition or if the Contractor or his representative is not upon the site so that he can be notified immediately of the insufficiency of safety precautions, the Engineer may put the work into such condition that it shall be, in his opinion, in all respects safe. The Contractor shall pay all costs and expenses incurred by the Engineer or Town in so doing. Such action of the Engineer or his failure to take such action, shall in no way relieve or diminish the responsibility of the Contractor for any and all costs, expenses, losses, liability, claims, suits, proceedings, judgments, awards, or damages resulting from by reason of, or in connection with the failure to take precautions or the insufficiency of the safety precautions taken by him or by the Engineer acting under authority of this section.

Any automotive equipment, not protected by traffic cones or plastic drums, that is working on a public way under this project shall have one amber flashing warning light mounted on the cab roof or on the highest practical point of the machinery visible to both oncoming and overtaking vehicles, at least 32 candlepower and 50 - 60 flashes per minute. This light shall be in operation while the equipment is working or traveling in the work area at a speed of less than 25 mph, and a slow moving vehicle emblem shall also be displayed.

Construction equipment shall not be parked within any traveled way unless said equipment is adequately lighted and protected by safety devices and vehicular traffic is appropriately detoured. Appropriate MUTCD requirements shall apply.

15. Steel Plates in Construction Zones (Supplementing Section 7.09 of the Standard Specifications)

At the end of each working day when trenches in areas of public travel are covered with steel plates, each edge of such plates shall be secured to base and beveled to grade as shown on the Plans.

16. Protection of Utilities and Property (Supplementing Subsection 7.13 of the Standard Specifications)

Written notice shall be given by the Contractor to all public service corporations or municipal and State officials owning or having charge of publicly or privately owned utilities of his intention to commence operations affecting such utilities at least one week in advance of the commencement of such operations. The Contractor shall, at the same time, file a copy of such notice with the Engineer. It is the Contractor's responsibility to provide adequate notice to all public and private utilities that may be affected by the construction of the project.

The following are the names of owners of the principal utilities affected as well as other major contacts, but accuracy and completeness of this list is not guaranteed:

Electric

National Grid
280 Melrose Street
Providence, RI
Attn: Thomas Capobianco
(401) 784-7248

Telephone

Verizon
385 Myles Standish Blvd
Taunton, MA 02780
Attn: Karen Mealey
(774) 409-3160

Cable

Comcast
PO Box 6505
Chelmsford, MA 01824
Attn: Wendy Brown
(978) 848-5183

Department of Public Works

Nantucket Department of Public Works
188 Madaket Road
Nantucket, MA 02554
Attn: Silvio Genao, P.E
(508) 228-7244

Water

Wannacomet Water Co.
1 Milestone Road
Nantucket, MA 02554
Attn: Mark Willett
(508) 228-0022

Engineer

Greenman-Pedersen, Inc.
181 Ballardvale Street, Suite 202
Wilmington, MA 01887
Attn: John Osorio, Project Manager
(978) 570-2973

Fire Alarm

Nantucket Fire Alarm
131 Pleasant Street
Nantucket, MA 02554
Attn: Robert Bates
(508) 228-2323

The Contractor's attention is directed to the necessity of making his own investigation in order to assure that no damage to existing structures, drainage lines, etc., will occur. Whatever measures are necessary to protect these lines during work shall be included in the Contract unit price for the items involved.

The locations of existing underground utilities are shown in an approximate way only and have not been independently verified by the owners or representatives. The Contractor shall notify Massachusetts DIG SAFE and procure a Dig Safe Number for each location prior to disturbing existing ground in any way. The Dig Safe Call Center telephone number is 1-888-344-7233.

The Contractor, in constructing or installing facilities alongside or near sanitary sewers, storm drains, water or gas pipes, electric or telephone conduits, poles, sidewalks, walls, vaults or other structures, trees, shrubs, grass and landscaping shall, at his expense, sustain them securely in place, cooperating with the officers and agents of the various utility companies and municipal departments which control them, so that the services of these structures shall be maintained. The Contractor shall also be responsible for the repair or replacement, at his own expense, of any damage to such structures caused by his acts or neglect, and shall leave them in the same condition as they existed prior to commencement of the work.

In case of damage to utilities, the Contractor shall promptly notify the utility owner and shall, if requested by the Engineer, furnish labor and equipment to work temporarily under the utility owner's direction in providing access to the utility. Pipes or other structures damaged by the operation of the Contractor may be repaired by the Town or by the utility owner that suffers the loss. The cost of such repairs shall be borne by the Contractor, without compensation therefor.

If, as the work progresses, it is found that any of the utility structures are so placed as to render it impracticable, in the judgment of the Engineer, to do the work called for under this Contract, the Contractor shall protect and maintain the services in such utilities and structures and the Engineer will, as soon thereafter as reasonable, cause the position of the utilities to be changed or take such other actions deemed suitable and proper.

If live service connections are to be interrupted by excavations of any kind, the Contractor shall not break the service until new services are provided.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals for doing all the work involved in protecting or repairing property as specified in this section, shall be considered included in the prices paid for the various Contract items of work and no additional compensation will be allowed therefore.

Utility structures not correctly adjusted to proper grade prior to paving or buried during construction shall be uncovered, repaired if necessary and reset to grade at Contractor's expense.

17. Prosecution of Work (Supplementing Subsection 8.03 of the Standard Specifications)

Before starting any work under this Contract, the Contractor shall prepare and submit to the Engineer for approval, a plan (based on the Contract Temporary Traffic Control Plans) that indicates the traffic routing proposed by the Contractor during the various stages and time periods of the work and the temporary barricades, signs, drums and other traffic control devices to be employed during each stage and time period of the work to maintain traffic and access to abutting properties.

Particular care shall be taken to establish and maintain methods and procedures that will not create unnecessary or unusual hazards to public safety. Traffic control devices required only during working hour operations shall be removed at the end of each working day. Signs having messages that are irrelevant to the proposed traffic conditions during each phase of operations shall be removed or properly covered at the end of each work period. Signs shall be kept clean at all times and legends shall be distinctive and unmarred.

When in the opinion of the Engineer, construction operations constitute a hazard to the safety of the travelling public in the area, the Contractor may be required to restrict or suspend operations and remove equipment from the roadway. The Contractor may also be required to suspend operations during certain hours and to remove the Contractor's equipment from the roadway.

Areas outside the limits of proposed work disturbed by the Contractor's operations shall be restored by the Contractor to their original condition at the Contractor's expense.

18. Safety Controls for Construction Operation (Supplementing Subsections 850.21 and 850.61 of the Standard Specifications)

Safety controls for construction operations shall be done in accordance with the relevant provisions of Section 850 of the Standard Specifications, the Manual on Uniform Traffic Control Devices, the Temporary Traffic Control Plans and the following:

The providing of safety controls for construction operations shall be considered incidental to this Contract and the costs for safety controls shall be included in the unit bid price for those Contract items requiring such controls.

Positioning, adjusting and re-positioning of all devices such as traffic cones, high level warning devices, etc., not otherwise classified and paid for under other items in this Contract, is considered incidental and no separate payment will be made.

19. Work Done By Others

Relocation and/or resetting to new grades of all private utilities, including utility poles, will be accomplished by the respective utility.

20. Material Removed and Stacked

All materials owned by the municipality and noted on the Contract documents to be removed and stacked shall be carefully removed, transported and stacked (on boards) at the discretion of the Engineer to the Nantucket Department of Public Works yard at 188 Madaket Road during normal business hours.

The Contractor shall be held responsible for any damage to the materials to be stacked before final removal. The Contractor's responsibility shall cease upon final acceptance of the work or 60 days from the time a certified notice (with a copy sent to the Engineer) is sent to the owner of the material advising him that it is available for removal.

If the Engineer or the Town determines that any part of the stacked material is unsuitable for reuse, said materials shall become the property of the Contractor, and the Contractor shall dispose of them away from the site. No separate payment will be made for this work, but all costs in connection therewith shall be included in the prices bid for various Contract items.

21. Disposal of Surplus Materials

All existing and other materials not required or needed for use on the project, and not required to be removed and stacked, shall become the property of the Contractor and shall be removed from the site during the construction period and disposed of legally. No separate payment will be made for this work, but all costs in connection therewith shall be included in the prices bid for various Contract items.

22. Drainage

It shall be the Contractor's responsibility to maintain drainage in the project areas to provide continual drainage of the travel ways and construction area and in conformance with permits and approvals in the area under construction prior to the time the final system is put into use.

23. Property Bounds

The Contractor shall exercise due care when working around all property bounds which are to remain. This shall include, but not necessarily be limited to, concrete and granite bounds, iron rods, rebars, stakes, pipes, nails, or any other property or layout markers whether existing or proposed under this project. Should any damage to a property marker result from the actions of the Contractor, the marker shall be replaced, realigned, and/or reset to its intended position and certified as to the correct location by a Massachusetts registered professional land surveyor as directed by the Engineer. No further compensation will be due to the contractor for the materials and labor required to re-establish the property marker as described above.

24. Concrete Foundations

Concrete foundations of items to be removed, if not interfering with the proposed construction, may be abandoned in place with approval of the Engineer. Foundations left in place under roadway surface shall be removed to a depth of 3 feet below finished grade; all other foundations left in place shall be removed to a depth of 12 inches below the finished grade. The top 12 inches shall be restored to match the existing grade with materials similar in kind to the abutting materials.

25. Temporary Access to Area Residents

The work is in a predominantly residential area of the Town and access to all properties must be maintained at all times. The Contractor shall provide safe and ready means of ingress and egress to all abutting properties in the project area, both day and night, for the duration of the project.

26. Open Excavations

All open excavations shall be adequately safe guarded by providing temporary barricades, caution signs, lights and other means to prevent accidents to persons, and damage to property. The length of open trench will be controlled by the particular surrounding conditions, but shall always be confined to the limits prescribed by the Town. If the excavation becomes a hazard, or if it excessively restricts traffic at any point, special construction procedures shall be taken, such as limiting the length of open trench or requiring that the trench shall not remain open overnight.

27. Sheeting and Bracing

The Contractor shall furnish, place and remove all sheeting and bracing required to support the sides of the trenches or other excavations for this project.

The Contractor shall be solely responsible for the safety of the workman and the adjacent facilities from danger of caving and sliding and all work to be done shall be in strict accordance with the Department of Labor, Occupational Safety and Health Administration regulations and suggested practices for construction excavation and/or other applicable codes and regulations.

Special precautions shall be taken to guard against any damage to or settlement of pavements, buildings, walls, pipes, ducts, or other structures and facilities that are adjacent to the work.

The cost of providing and removing sheeting, shoring and bracing shall be included in the cost of various items of work under this contract and no additional compensation will be allowed therefore.

28. Work During Inclement Weather

No work shall be done under this Contract except by permission of the Engineer when the weather is unfit for good and careful work to be performed. Should the severity of the weather continue, the Contractor, upon the direction of the Town, shall suspend all work until instructed to resume operations by the Town. Time shall be extended to cover the duration of the order. Work damaged during periods of suspension due to inclement weather shall be repaired and/or replaced by the Contractor. No earth fill or embankment shall be placed upon frozen material. If there is a delay in the Work due to the weather conditions, the necessary precautions must be taken to bond new work to old.

29. Sweeping of Streets

All work areas shall be kept clean by the Contractor. The Contractor shall provide weekly sweeping of streets and gutters within the Limits of Work, subject to approval of the Engineer. The Contractor shall also be responsible for sweeping and cleaning of surfaces beyond the limits of the project to clean up material caused by spillage or vehicular tracking during the various phases of the work. Sweeping of streets shall be included in the various items and no additional compensation will be allowed therefore.

30. Shop Drawings Submittals

The Contractor shall, within 10 days after receipt of Notice to Proceed, submit to the Engineer for approval a submittals schedule for all materials and equipment required for this Project. Submittals schedule shall indicate required dates for submitting shop drawings, samples, and product data for materials in order to meet project schedule.

The approval of Shop Drawings shall be general and shall not relieve the Contractor of his responsibility for adherence to the contract or for any error in the drawing.

The Contractor shall not receive payment for, nor will he be allowed to install any item or materials, which require shop drawing approval unless and until he has received shop drawing approval for that item from the Design Engineer with an approval stamp placed thereon.

Within 15 days after receipt of an approved shop drawing for any item, the Contractor shall provide the Town written proof that he has ordered such approved materials required on the subject contract and a written confirmation of such order and delivery schedule from the manufacturer of the item. This delivery schedule shall be appropriate for timely completion of this project.

31. Public Water Supply

The Contractor shall note that there is no public water supply in the area of the project. The Contractor will be required to transport water required for construction of the project to the job site. Water required for construction of the project will be considered to be incidental to the various items of work.

32. Personal Protective Safety Equipment for Contractor Personnel

The Contractor is responsible to ensure that all personnel, including all subcontractors, working on the project are issued and are wearing all necessary personal protective safety equipment while working within the project limits. This equipment shall include, as a minimum, a hardhat and a safety vest, regardless of the type of work being performed. Other safety equipment shall be added as required to perform the work in which they are engaged and in accordance with all local, state and federal requirements in effect. Safety equipment shall be provided at no additional cost to the Town.

33. Mobilization

The Bidder's attention is directed to Subsection 748.20 of the MassDOT Supplemental Specifications. **The unit price for Mobilization (Item 748.) shall not exceed 3% of the contract bid total, exclusive of this item and Item 899, Traffic Police.** Failure to observe this requirement may result in rejection of the bid in accordance with Subsection 2.04 of the Standard Specifications.

34. Pavement Markings

All permanent pavement markings must be applied within two weeks of paving the top course. The Contractor shall not wait until all paving has been completed prior to applying the permanent pavement markings.

35. Sawcuts

Sawcuts shall be made in new and/or existing pavement in areas of excavation, pavement transition limits, at driveways, limits of full depth pavement construction and as directed by the Engineer. **Payment for this work shall be included in the unit price under the applicable items.**

36. Pavement Joints

All joints between proposed pavement and existing pavement to remain shall be coated with a hot poured rubberized asphalt sealant. This work shall be considered incidental to Item 460.

37. Oil and Hazardous Material Spills Prevention

Measures must be taken by the Contractor to prevent spills and leaks of oils or other hazardous materials to the environment. Such measures include but are not limited to:

- (1) Proper maintenance of construction equipment.
- (2) Design fuel and hazardous material handling areas so as to prevent releases to the environment (include containment structures if needed).
- (3) Instruct personnel in proper waste handling procedures and strictly prohibit disposal into drains, waterways or receptacles designed for non-hazardous waste only (e.g. trash dumpsters).

The Department of Environmental Protection (DEP) regulations 310 CMR 30.00 and 40.00 address proper management procedures for oil and hazardous waste. Releases or threats of releases of oil or hazardous materials must be reported to the DEP if the amounts equal or exceed reportable quantities. Reportable quantities are listed by DEP in 310 CMR 40.900. Notification to DEP must be made as soon as possible but not more than two hours after obtaining knowledge of a release or threat of release.

38. Precautions Under Electric Lines

The Contractor's attention is directed to the AASHTO Guide on Occupational Safety on Highway Construction Projects, Subpart N, 1926.550, relating to construction equipment clearances at overhead electric lines, which states in part "...the minimum clearance between the lines and any part of the crane or load must be at least ten feet from lines rated 50 KV or below, and greater distances for higher voltage...".

For the protection of personnel and equipment, the Contractor shall be aware of this regulation especially during paving operations using large semi-trailer vehicles.

39. Concrete Work

The various classes of concrete shall conform to the applicable requirements of Section 901 of the Standard Specifications with the following conditions. Where the Contractor is given the option of cast-in-place concrete or precast units, the steel reinforcements shall be the same, whichever is used. If a lifting hook is required for a precast unit, it shall be so placed that it will neither cramp the space for work to be done within the unit nor appear on the exposed surface of the completed work. Surfaces that will be exposed in the completed work shall be finished with a wood float.

All concrete forms except sheeting, whether below or above grade, shall be removed. Steel reinforcement shall conform to the applicable provisions of Subsection M8.01.0 of the standard Specifications, except that bars used for pulling irons shall be plain bars without deformation.

Where anchor bolts are to be embedded in concrete, the embedment shall be made in accordance with the bolt circle template acquired from and furnished by the manufacturer of the item to be anchored. The bolt location must be oriented to place the item in the required position with respect to the street and the intent shown on the Contract Plans.

40. Preservation of Roadside Growth (Section 8.08 shall be amended as follows)

The Contractor shall take all necessary care when excavating or working in the vicinity of existing trees so that the root systems, trunks, and branches are not damaged. All precautions shall be taken to insure that heavy equipment does not damage any roots, including those that lie below the limits of excavation.

Do not store equipment or stockpile materials within drip line of trees or in areas enclosed by tree protection fencing.

Avoid any direct soil contamination in root zone area by petroleum, petroleum products or solvents, salts or any other pollutant during construction.

All cutting or trimming of trees to be preserved shall be executed by a Massachusetts Certified Arborist. The Contractor shall provide the Engineer with a copy of the certification prior to any work on trees.

Existing trees adjacent to construction may be protected using Individual Tree Protection as specified under Item 102.51.

Trees that, in the judgment of the Engineer, have been irreparably damaged by the Contractor shall be replaced in kind and in size, or with a quantity of 2-inch minimum caliper replacement trees (the quantity of which shall be determined by the Engineer) such that the cumulative caliper of the replacement trees will be up to the equivalent of diameter of the lost tree at breast height.

The cost for the removal of destroyed tree(s), including roots and stump, as well as the cost of replacement trees, shall be paid for by the Contractor.

41. Architectural Access Board Tolerances

The Contractor is hereby notified that they are ultimately responsible for constructing all project elements in strict compliance with the current AAB/ADA rules, regulations and standards.

All construction elements in this project associated with sidewalks, walkways, wheelchair ramps and curb cuts are controlled by 521CMR - Rules and Regulations of the Architectural Access Board (AAB).

The AAB Rules and Regulations specify maximum slopes and minimum dimensions required for construction acceptance. There is no tolerance allowed for slopes greater than the maximum slope nor for dimensions less than the minimum dimensions.

The Contractor shall establish grade elevations at all wheelchair ramp locations, and shall set transition lengths according to the appropriate table in the Construction Standards (or to the details shown on the plans).

All wheelchair ramp joints and transition sections which define grade changes shall be formed, staked and checked prior to placing cement concrete. All grade changes are to be made at joints.

The Contractor is hereby notified of the need to install Detectable Warning Panels on all wheelchair ramps in accordance with Construction Standard M/E 107.2.1R. Detectable warning panels shall be constructed of inlayed prefabricated or cast-in-place. Surface applications such as thermoplastic shall

not be accepted. **The contractor shall contact the Town to determine the color prior to ordering the panels. Failure to do so will mean that if the wrong color is ordered, the contractor will not be paid for those panels and will only be paid for the panels ordered in the correct and agreed upon color.**

42. Monthly Price Adjustment for Hot Mix Asphalt

This provision applies to all hot mix asphalt (HMA) mixtures containing liquid asphalt cement. The Price Adjustment will be based on the variance in price for the liquid asphalt component only from the Base Price to the Period Price. It shall not include transportation or other charges. This Price Adjustment will occur on a monthly basis.

Base Price

The Base Price of liquid asphalt is a fixed price determined during the month of the bid opening by MassDOT by using the same method as for the determination of the Period Price detailed below. This price will be used regardless if MassDOT has posted the price or not at the time of the bid opening.

Asphalt Period Price Method

The "New Asphalt Period Price Method" is for contracts bid after December 15, 2008 and will show the Period Price of liquid asphalt for each monthly period as determined by MassDOT using the average selling price per standard ton of PG64-28 paving grade (primary binder classification) asphalt, FOB manufacturer's terminal, as listed under the "East Coast Market - New England, Boston, Massachusetts area" section of the Poten & Partners, Inc. "Asphalt Weekly Monitor". This average selling price is listed in the issue having a publication date of the second Friday of the month and will be posted as the Period Price for that month. MassHighway will post this Period Price on this website within two (2) business days following their receipt of the relevant issue of the "Asphalt Weekly Monitor". Poten and Partners has granted MassHighway the right to publish this specific asphalt price information sourced from the Asphalt Weekly Monitor.

The Contract Price of the hot mix asphalt mixture will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

The Price Adjustment applies only to the actual virgin liquid asphalt content in the mixture placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M3.11.03.

The Price Adjustment will be a separate payment item. It will be determined by multiplying the number of tons of hot mix asphalt mixtures placed during each monthly period times the liquid asphalt content percentage times the variance in price between Base Price and Period Price of liquid asphalt.

This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is a Town-approved extension of time.

43. Monthly Price Adjustment For Diesel Fuel and Gasoline

This monthly fuel price adjustment is inserted in this contract because the national and worldwide energy situation has made the future cost of fuel unpredictable. This adjustment will provide for either additional compensation to the Contractor or repayment to the Town, depending on an increase or decrease in the average price of diesel fuel or gasoline.

This adjustment will be based on fuel usage factors for various items of work developed by the Highway Research Board in Circular 158, dated July 1974. These factors will be multiplied by the quantities of work done in each item during each monthly period and further multiplied by the variance in price from the Base Price to the Period Price.

The Base Price of Diesel Fuel and Gasoline is a fixed price determined during the month of the bid opening by MassDOT by using the same method as for the determination of the Period Price detailed below. This price will be used regardless if MassDOT has posted the price or not at the time of the bid opening.

The Period Price will be the average of prices charged to the State, including State Tax for the bulk purchases made during each month.

This adjustment will be effected only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No adjustment will be paid for work done beyond the extended completion date of any contract.

Any adjustment (increase or decrease) to estimated quantities made to each item at the time of final payment will have the fuel price adjustment figured at the average period price for the entire term of the project for the difference of quantity.

The fuel price adjustment will apply only to the following items of work at the fuel factors shown:

ITEMS COVERED	FUEL FACTORS	
	Diesel	Gasoline
Excavation and Borrow Work: Items 120.1, 121., 150., and 151. (Both Factors used)	0.29 Gallons/CY	0.15 Gallons/CY
Surfacing Work: All Items containing Hot Mix Asphalt	2.90 Gallons/Ton	Does Not Apply

44. Monthly Price Adjustment For Portland Cement Concrete Mixture

This provision applies to all projects using Portland cement concrete. This Price Adjustment will occur on a monthly basis.

The Price Adjustment will be based on the variance in price for the Portland cement component only from the Base Price to the Period Price. It shall not include transportation or other charges.

The Base Price of Portland Cement is a fixed price determined during the month of the bid opening by MassDOT by using the same method as for the determination of the Period Price detailed below.

This price will be used regardless if MassDOT has posted the price or not at the time of the bid opening.

The Period Price of Portland cement will be determined by using the latest published price, in dollars per ton (U.S.), for Portland cement (Type I) quoted for Boston, U.S.A. in the Construction Economics section of ENR Engineering News-Record magazine or at the ENR website <http://www.enr.com> under Construction Economics. The Period Price will be posted on the MassHighway website the Wednesday immediately following the publishing of the monthly price in ENR, which is normally the first week of the month.

The Contract Price of the Portland cement concrete mix will be paid under the respective item in the Contract. The price adjustment, as herein provided, upwards or downwards, will be made after the work has been performed, using the monthly period price for the month during which the work was performed.

The price adjustment applies only to the actual Portland cement content in the mix placed on the job in accordance with the Standard Specifications for Highways and Bridges, Division III, Section M4.02.01. No adjustments will be made for any cement replacement materials such as fly ash or ground granulated blast furnace slag.

The Price Adjustment will be a separate payment item. It will be determined by multiplying the number of cubic yards of Portland cement concrete placed during each monthly period times the Portland cement content percentage times the variance in price between the Base Price and Period Price of Portland cement.

This Price Adjustment will be paid only if the variance from the Base Price is 5% or more for a monthly period. The complete adjustment will be paid in all cases with no deduction of the 5% from either upward or downward adjustments.

No Price Adjustment will be allowed beyond the Completion Date of this Contract, unless there is an approved extension of time.

End Division I

DIVISION II

ITEM 102.51 ITEM 102.52

INDIVIDUAL TREE PROTECTION TEMPORARY TREE PROTECTION FENCE

EACH FOOT

The work under these items shall conform to the relevant provisions of Sections 101, 644 and 771 and the following:

The purpose of these items is to prevent damage to branches, stems and root systems of existing individual trees as well as shrubs and other quality vegetation to remain, and to ensure their survival. To the extent possible, to avoid soil compaction within the root zone, construction activities including, but not limited to, vehicle movement, excavation, embankment, staging and storage of materials or equipment shall not occur underneath the canopy (drip line) of trees to remain. Where these activities will occur within 10 feet of the canopy of trees or where directed, the Contractor shall take the appropriate protective measures specified herein.

Individual Tree Protection, Item 102.51, shall be used when construction activities are likely to occur within the canopy of individual trees or where there may be any risk of damage to trees.

Temporary Tree Protection Fence, Item 102.52, shall be used to protect areas of existing trees or other areas of quality vegetation that is to remain.

The Contractor shall be solely responsible for judging the full extent of the work requirements, including, but not necessarily limited to any equipment and materials necessary for providing tree protection.

Incidental to the cost of these items, the Contractor shall retain the services of a certified arborist, who shall make recommendations as to the specific appropriate treatment of trees within or near the work zone.

Prior to any construction activities, the Contractor and Arborist shall walk the site with the Engineer and Town Tree Warden to identify which trees will require protection and to determine approved measures. The Arborist shall make recommendations as to appropriate methods to protect the trees. The Engineer will have final decision as to trees and methods.

The Contractor is responsible for the protection of all existing trees and plants within and immediately adjacent to the construction area that are not designated to be removed for the length of the construction period.

SUBMITTALS

Incidental to this item, the Contractor shall provide to the Engineer one (1) copy American National Standards Institute (ANSI) Standard Z-133.1 and A300 Standard Practices for Tree, Shrub, and Other Woody Plant Maintenance, Part 1: Pruning. These references shall be kept by the Engineer at his office for the length of the Contract.

Prior to start of work, the Contractor shall submit to the Engineer the name and certification number of the Massachusetts Certified Arborist referenced herein. Cost for Certified Arborist for all activities pertaining to this Item shall be incidental to this item.

MATERIALS

Fence and temporary fence posts shall be subject to the approval of the Engineer.

Fencing for individual plants shall be polyethylene fencing or chain link fence (new or used).

Staking for individual tree protection fencing shall be steel posts or 2x4 lumber as directed and approved by the Engineer.

Wood chips shall conform to provisions of Wood Chip Mulch under Materials Section M6.04.3.

Trunk protection shall be 2x4 cladding, at least 8 feet in length, clad together with wire. Alternative materials shall be at the approval of the Engineer. Alternative materials shall provide adequate protection from anticipated construction activities and shall not injure or scar trunk. Trunk protection shall include burlap to separate trunk cladding from bark.

Temporary Tree Protection Fence shall be brightly colored polypropylene barricade or wooden snow fencing for tree protection or safety fencing as shown on the Contract drawings or as directed by the Engineer. Fencing shall be a minimum of 4 feet high and supported by steel or hardwood stakes spaced at a maximum of 8 feet on center or by other means acceptable to the Engineer. Fencing shall be materials and fastenings sufficient to provide sturdy and highly visible separation of the construction activities from the trees and existing plantings to be preserved.

Incidental to these items, the Contractor shall provide water for maintaining plants in the construction area that will have exposed root systems for any period during construction.

CONSTRUCTION METHODS

To the extent possible, to avoid soil compaction within the root zone, construction activities including, but not limited to, vehicle movement, excavation, embankment, staging and storage of materials or equipment shall not occur underneath the canopy (drip line) of trees to remain. Where these activities will occur within 10 feet of the canopy of trees, the Contractor shall provide Individual Tree Protection as specified herein.

For individual tree protection, the Contractor shall set posts and fencing at the limits of the tree canopy. Where construction activities closer to the trees is unavoidable, the contractor shall tie branches out of the way and place wood chips to a depth of 6 inches on the ground to protect the root systems. The Contractor shall wrap the area of the trunk of the tree with burlap prior to armoring with 2x4 cladding. Cladding for tree trunks shall extend from the base of the tree to at least 8 feet from the base.

To the extent possible, temporary landscaped fencing shall be installed at the limit of tree canopy and shall be staked and maintained vertical for the length of the contract.

Where excavation within canopy is unavoidable, the Contractor shall use equipment and methods that shall minimize damage to the tree roots, per recommendations of the Certified Arborist. Such methods may require root pruning prior to, as well as during, any excavation activities.

All fencing, trunk protection, branch protection, and woodchips shall be maintained throughout the duration of the contract. Protective fencing shall be repaired and woodchip mulch replaced as necessary during the duration of the contract at no additional cost.

Cutting and Pruning

Some pruning of roots and branches may be a necessary part of construction. Pruning will be performed on the same side of the tree that roots have been severed.

The Contractor shall retain the services of a Massachusetts State Certified Arborist to oversee any cutting of limbs, stem or roots of existing trees. All cuts shall be clean and executed with an approved tool. Under no circumstances shall excavation in the tree protection area be made with mechanical equipment that might damage the existing root systems.

Any tree root area exposed by construction shall be covered and watered immediately. Exposed tree roots shall be protected by dampened burlap at all times until they can be covered with soil.

Watering

Water each tree within the construction area where work is in progress twice per week until the surrounding soil of each tree is saturated for the duration of construction activities.

Removal of Protection

After all other construction activities are complete, but prior to final seeding, wood chips, temporary fencing, branch protection, and trunk protection materials shall be removed and disposed off site by the Contractor at no additional cost.

Tree Damage

The Contractor shall be held responsible for the health and survival of the existing trees in the immediate vicinity of the of the construction area. Damage that, in the Engineer's opinion, can be remedied by corrective measures shall be repaired immediately. Broken limbs shall be pruned according to industry standards. Wounds shall not be painted. Trees or shrubs that are damaged irreparably shall, at the Engineer's discretion, be replaced per the requirements of Division I of these Special Provisions. Cost of replacement trees shall be borne by the Contractor.

METHOD OF MEASUREMENT AND PAYMENT

Where the plans show specific, individual trees to remain and where grading or other disturbance is shown within the drip line of these trees or where the Engineer determines that an individual tree must be protected, these trees shall be protected and paid for under Item 102.51 Individual Tree Protection per each tree protected.

Temporary tree protection fence will be measured for payment by the foot of fence installed, complete in place.

Where the plans show specific, individual trees to remain and where grading or other disturbance is shown within the drip line of these trees or where the Engineer determines that an individual tree must be protected, these trees shall be protected and paid for under Item 102.51, Individual Tree Protection.

Payment under these items shall be scheduled throughout the length of contract: 30 percent of value shall be paid upon installation, 30 percent approximately halfway through the contract, and the remainder to be paid at the end of the contract after completion of construction operations that would disturb plants and after the protection materials have been removed and properly disposed of off-site by the Contractor.

Compensation for Individual Tree Protection will be paid for at the contract unit price per each under Item 102.51. This item shall include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work, including the services of a certified arborist, water and fertilizer, and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract.

Where construction disturbance, such as grading activities, will occur within the limits of the canopy of groups of trees, these trees shall be protected and paid for under Item 102.52, Temporary Tree Protection Fence.

Temporary Tree Protection Fence will be paid for at the Contract unit price per foot. This item shall include full compensation for all labor, equipment, materials, and incidentals for the satisfactory completion of the work, including the services of a certified arborist, water and fertilizer, and the subsequent removal and satisfactory disposal of the protective materials upon completion of the contract.

Cost of wood chips, as required, shall be incidental to these items.

ITEM 120.1

UNCLASSIFIED EXCAVATION

CUBIC YARD

The work under this Item shall conform to the relevant provisions of Section 120 and the following:

The work includes the excavation and disposal of asphalt pavement, earth, muck, junk and other debris. The work shall also include the removal and disposal of existing materials shown on the drawings to be removed and reset, but which in the judgment of the Engineer and/or the Municipality, as appropriate, are unsuitable for reuse.

The work shall also include the removal and disposal of sign posts from which signs are removed or as directed by the Engineer.

Edges of excavations made in existing pavements shall be squared by saw cutting with power-driven tools to provide a neat, clean edge for joining new pavement as shown on the Plans. Ragged, uneven edges will not be accepted. Pavement areas which have been broken or undermined shall be edged neatly with minimum disturbance to the remaining pavement.

Where new driveways abut existing pavements to remain, existing pavement shall be saw cut. Where sod is removed for street widening, sod shall be evenly cut to a clean edge. Care shall be exercised not to damage trees outside the limits of the project.

METHOD OF MEASUREMENT AND PAYMENT

Unclassified Excavation shall be measured and paid for in accordance with the provisions of Section 120 of the Standard Specifications. All other material to be removed under Item 120.1 shall be measured per Cubic Yard in the truck prior to disposal off-site.

ITEM 145.
ITEM 146.

DRAINAGE STRUCTURE ABANDONED
DRAINAGE STRUCTURE REMOVED

EACH
EACH

Work under these Items shall conform to the relevant provisions of Section 140 Subsection 140.63 of the 1986 Standard Specifications and the following:

The removal and stacking of the castings will be paid under Item 222.2 Frames and Grates or Cover Removed and Stacked.

METHOD OF MEASUREMENT AND PAYMENT

Drainage Structure Abandoned and Drainage Structure Removed shall be measured for payment by each unit abandoned in place or removed.

Drainage Structure Abandoned and Drainage Structure Removed will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

If an existing drainage structure is in the same location as a proposed structure to be installed, then removal of the existing drainage structure will be included in the cost of the proposed drainage structure.

ITEM 151.6

GRAVEL BORROW -
EXCLUDING THE COST OF GRAVEL BORROW

CUBIC YARD

The work under this Item shall conform to the relevant provisions of Section 150 and the following:

Gravel borrow shall be set as shown on the drawings. Gravel borrow shall be supplied by the Town of Nantucket Department of Public Works (DPW). The Contractor shall make arrangements with the DPW to pick up the proposed gravel borrow, and to deliver the material to the project site.

METHOD OF MEASUREMENT AND PAYMENT

Gravel borrow - excluding cost of gravel borrow will be measured for payment per Cubic Yard, complete in place. The weight slips shall be countersigned on delivery by the Engineer or will not be accepted for payment.

Gravel borrow - excluding cost of gravel borrow will be paid for at the Contract unit price per Cubic Yard, which price shall include all labor, equipment and incidental costs required to complete the work.

ITEM 201.
ITEM 205.

CATCH BASIN
LEACHING BASIN

EACH
EACH

The work under these items shall conform to the relevant provisions of Section 201 of the Standard Specifications and the following:

All catch basins shall be provided with 4-foot sumps.

Filter fabric shall be installed around the side and bottom of the leaching basin between the crushed stone and the undisturbed earth.

METHOD OF MEASUREMENT AND PAYMENT

Catch Basin and Leaching Basin shall be measured for payment by each unit installed, complete, regardless of depth.

Catch Basin and Leaching Basin will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

The cost for providing and installing catch basins and leaching basins, complete, shall include the entire structure, regardless of depth.

The cost for providing and installing leaching basins, complete, shall include crushed stone on the sides and bottom as shown in the detail on the plans.

ITEM 222.3 FRAME AND GRATE (OR COVER) MUNICIPAL STANDARD EACH

Work under this Item shall be in accordance with the relevant provisions of Section 220 of the Standard Specifications and the following:

DESCRIPTION

Leaching basin covers shall have a diamond pattern; pick holes and the word "DRAIN" cast in 3-inch letters. Frames shall be 8-inches in height.

Catch basin frames shall be 8-inch high, four flange frames with grates shall be manufactured by East Jordan Iron Works (Model 5520M) or approved equal.

Casting frames shall be set in a full mortar bed with bricks, a maximum of 8 inches thick. All castings shall be set in a full concrete collar, conforming to Construction Standard Detail E 202.9.0.

All frames and grates or covers shall be American-made.

METHOD OF MEASUREMENT AND PAYMENT

Frame and grate (or cover) municipal standard will be measured for payment by the each, complete in place.

Frame and grate (or cover) municipal standard will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

**ITEM 223.1 FRAME AND GRATE (OR COVER) EACH
REMOVED AND STACKED**

Work under this Item shall be in accordance with the relevant provisions of Section 220 of the Standard Specifications and the following:

DESCRIPTION

The existing frames and grates or covers from existing structures shown on the plans to be abandoned, removed or change in type, shall be carefully removed, transported and stacked (on boards) at the discretion of the Engineer to the Nantucket Department of Public Works yard at 188 Madaket Road during normal business hours.

If the Town determines that any part of the stacked material is unsuitable for reuse, or if the Town decides to abandon part or all of such materials, said material shall become the property of the Contractor, and he shall dispose of them away from the site.

METHOD OF MEASUREMENT AND PAYMENT

Frame and grate (or cover) removed and stacked will be measured for payment by the each, complete in place.

Frame and grate (or cover) removed and stacked will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

Compensation for the removal and disposal of unsuitable or abandoned frame and grate (or cover) shall be incidental to this item.

ITEM 225.52 TRAP AND HOOD – MUNICIPAL STANDARD EACH

Work under this Item shall be in accordance with the relevant provisions of Section 220 of the Standard Specifications and the following:

DESCRIPTION

Trap and hood – municipal standard shall be installed on the outlet pipe of all catch basins installed on the project. Traps and hoods shall be “The Eliminator™” manufactured by Ground Water Rescue, Inc.; the “Snout®” manufactured by Best Management Products, Inc., “PPF Catch Basin Hood” manufactured by E.J. Prescott, Inc. or approved equal.

METHOD OF MEASUREMENT AND PAYMENT

Trap and hood – municipal standard will be measured for payment by the each, complete in place.

Trap and hood – municipal standard will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 460. HOT MIX ASPHALT TON

The work under this item shall conform to the relevant provisions of Section 460 of the Standard Specifications and the following:

It is intended that Superpave mixes be placed for the roadway surface, intermediate, and base courses, as well as for all hot mix asphalt driveways and driveway aprons.

METHOD OF MEASUREMENT AND PAYMENT

Hot mix asphalt will be measured for payment by the ton, complete in place.

Hot mix asphalt will be paid for at the Contract unit price per ton, which price shall include all labor, materials, equipment and incidental costs required to complete the work. Hot mix asphalt roadway surface, intermediate, and base courses shall be paid for under Item 460 regardless of material type. All HMA driveways and driveway aprons shall be paid for under this item as well.

Asphalt emulsion for tack coat, and HMA joint sealant shall be incidental to Item 460.

ITEM 470.2**HOT MIX ASPHALT BERM, TYPE A - MODIFIED****FOOT**

Work under this Item shall conform to the relevant provisions of Section 470 of the Standard Specifications and the following:

CONSTRUCTION

Hot Mix Asphalt Berm, Type A – Modified, shall be constructed by means of an approved extrusion machine in conformance with the dimensions and at the locations shown on the Plans.

METHOD OF MEASUREMENT AND PAYMENT

Hot mix asphalt berm, Type A – Modified will be measured for payment by the foot, complete in place.

Hot mix asphalt berm, Type A – Modified will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 487.1**COBBLESTONE PAVEMENT
REMOVED AND RESET****SQUARE YARD**

The work under this item includes the removal of existing cobblestone driveways and furnishing and placing a new setting bed and resetting the stones.

The existing cobblestones shall be carefully removed, stored and protected until reused in the proposed work. New cobblestones similar in shape, size and composition to the existing stones shall be furnished to replace any existing stones that are unsuitable for reuse or lost during the stockpiling period.

Existing cobblestones shall be cleaned to remove all cement concrete mortar or bituminous concrete before being reused in the proposed work.

Gravel Borrow shall conform to Section M1.03.0 Type b.

Stone Dust shall conform to the following gradation:

<u>Sieve No.</u>	<u>Percent Passing</u>
No. 4	100
No. 50	90
No. 200	65

After removal of the existing cobblestones, the proposed pavement area shall be excavated to proposed subgrade and fine graded and compacted under Item 170.

The 8-inch gravel borrow and a 3-inch minimum thickness bed of stone dust shall be placed and compacted. The stone dust bed shall be excavated manually to bed the larger stone and additional stone dust material placed around the smaller stones as they are laid.

The cobblestones shall be set with the long axis of each stone vertical to the roadway surface and with each cobblestone touching another cobblestone.

The cobblestones shall be tamped with a mechanical plate compactor or by another method approved by the Engineer.

After a sufficient area of block pavement has been laid, the pavement surface shall be tested with a 10-foot straight edge laid parallel with the centerline and any variations exceeding ½ inch shall be corrected and brought to proper grade.

The cobblestones shall be swept with a sand/cement mixture (three parts dry sand, one part cement) and fogged with water. The pavement surface shall be vibrated with a lightweight plate compactor to insure compaction between the joints. Additional joint filler of sand/cement shall be uniformly distributed as necessary to fill all of the voids. The process shall be repeated for a maximum of five days until all joints are full.

Existing cobblestones removed and not required for the proposal work shall be stacked on the property of each respective abutting property owner. If the property owner requests removal, the excess cobblestones shall become the property of the Contractor, and the Contractor shall dispose of them away from the site. No separate payment will be made for this work, but all costs in connection therewith shall be included in the bid price for Item 487.1.

METHOD OF MEASUREMENT AND PAYMENT

Cobblestone pavement removed and reset will be measured for payment by the square yard complete in place.

Cobblestone pavement removed and reset will be paid for at the contract unit price per square yard, which price shall include all labor, material, equipment and incidental costs required to complete the work.

No separate payment will be made for excavation or stone dust but all costs in connection therewith shall be included in the unit price bid. Gravel borrow will be paid for under Item 151.

ITEM 635.1

HIGHWAY GUARD REMOVED AND DISCARDED

FOOT

The work under this item shall conform to the relevant provisions of Section 630 of the Standard Specifications and the following:

DESCRIPTION

The work shall consist of the removing highway guard as indicated on the plans or as directed by the Engineer. The Contractor shall legally dispose of the existing materials at an off-site location.

METHOD OF MEASUREMENT AND PAYMENT

Highway guard removed and discarded will be measured for payment by the foot along the length actually removed. Measurement for this item shall occur prior to removing any highway guard.

Highway guard removed and discarded will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

ITEM 655.01**WOOD RAIL FOR FENCING****FOOT**

The work to be done under this item shall conform to relevant provisions of Section 665 and the following:

DESCRIPTION

The work included under this item consists of furnishing and installing, as required, wood rail for fencing to replace existing rails that are to be removed and reset but are unsuitable for reuse as determined by the Engineer.

The fence rails shall be of a similar type to the existing wood rails. The rails shall be set at a uniform height matching the existing fences to remain and along the proposed lines, as shown on the plans or as directed by the Engineer.

METHOD OF MEASUREMENT AND PAYMENT

Wood Rail for Fencing shall be measured and paid by the foot end to end of the rail complete in place, which price shall include all labor, equipment, material and incidental costs required to complete the work to the satisfaction of the Engineer.

ITEM 655.02**WOOD FENCE POST****EACH**

The work to be done under this item shall conform to relevant provisions of Section 665 and the following:

DESCRIPTION

The work included under this item consists of furnishing and installing, as required, wood fence posts to replace existing posts that are to be removed and reset but are unsuitable for reuse as determined by the Engineer.

The fence posts shall be of a similar type to the existing wood fence posts. Fence posts shall be installed plumb in augured holes. The wood posts shall be backfilled with gravel unless otherwise directed by the Engineer. Lawn sod at new postholes shall be carefully removed and replaced around the posts after backfilling.

METHOD OF MEASUREMENT AND PAYMENT

Wood Fence Post shall be measured and paid for by each post, which price shall include all labor, equipment, material and incidental costs required to complete the work to the satisfaction of the Engineer.

ITEM 670.**FENCE REMOVED AND RESET****FOOT**

The work under these items shall conform to the relevant provisions of Section 665 of the Standard Specifications and the following:

DESCRIPTION

The work includes removing existing privately owned fences, fence gates, and gate posts that interfere with proposed construction due to realignment of the roadway and grade changes at the back of the sidewalk, and resetting said fences, fence gates, and gate posts as shown on the plans or as directed by the Engineer. Existing post foundations shall be removed and the holes shall be backfilled and compacted with suitable material or ordinary borrow.

Existing fence or gate elements, which in the judgment of the Engineer are unsuitable for reuse due to deterioration, shall be replaced with new material of matching type as approved by the Engineer.

Existing fence or gate elements unsuitable for reuse due to damage caused by the Contractor's operations shall be replaced with new material of matching type as approved by the Engineer at no additional compensation.

Fence posts and gateposts shall be installed plumb in augured holes. Metal posts shall be backfilled with concrete unless otherwise directed by the Engineer. Wood posts shall be backfilled with gravel unless otherwise directed by the Engineer.

Lawn sod at new postholes shall be carefully removed and replaced around the posts after backfilling. Reset fence or gates shall be set at a uniform height matching the existing fences to remain and along the proposed lines, as shown on the plans or as directed by the Engineer. Fences or gates on the layout line shall be located with the face of rail on the layout line and the posts on the abutting properties.

METHOD OF MEASUREMENT AND PAYMENT

Fence removed and reset will be measured for payment by the foot, complete in place.

Fence gate and gate posts removed and reset will be measured for payment by the each, complete in place.

Fence removed and reset will be paid for at the Contract unit price per foot, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for dismantling and storing fence, the excavation and disposal of the existing post foundations, gravel borrow and cement concrete required for post installations, but all costs in connection therewith shall be included in the Contract unit price bid.

Fence gate and gate posts removed and reset will be paid at the Contract unit price per each, which price shall be full compensation for all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for dismantling and storing fence, the excavation and disposal of the existing post foundations, gravel borrow and cement concrete required for post installations, but all costs in connection therewith shall be included in the Contract unit price bid.

Replacement of existing fence or gate elements which are unsuitable for reuse shall be paid for under Items 655.01 and 655.02.

ITEM 670.1

FENCE REMOVED AND STACKED

FOOT

The work under these items shall conform to the relevant provisions of Section 665 of the Standard Specifications and the following:

DESCRIPTION

The work includes removing and stacking of existing privately owned fences, fence gates, and gate posts as noted on the plans. Fences, gates and posts shall be carefully removed and stacked on the adjacent property at a location designated by the property owner. Existing post foundations shall be removed and the holes shall be backfilled and compacted with suitable material or ordinary borrow.

Existing fence or gate elements unsuitable for reuse due to damage caused by the Contractor's operations shall be replaced with new material of matching type as approved by the Engineer at no additional compensation.

METHOD OF MEASUREMENT AND PAYMENT

Fence removed and stacked will be measured for payment by the foot prior to removal. Fence gates to be removed and stacked will be measured for payment by the foot prior to removal.

Fence removed and reset will be paid for at the Contract unit price per foot, including fence gates, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for dismantling and stacking fence, the excavation and stacking of fence posts, and backfilling, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 697.1

INLET SEDIMENT CONTROL DEVICE

EACH

Work under this item shall conform to the relevant provisions of Section 670 of the Standard Specifications and the following:

GENERAL

The work under this item includes the furnishing, installation, maintenance and removal of a reusable fabric sack to be installed in drainage structures for the protection of wetlands and other resource areas and the prevention of silt and sediment from the construction site from entering the storm water collection system. Devices shall be ACF Environmental (800) 448-3636; Reed & Graham, Inc. Geosynthetics (888) 381-0800; The BMP Store (800)-644-9223; or approved equal.

CONSTRUCTION

Inlet sediment control devices shall be installed in retained existing and proposed catch basins within the project limits and as required by the Engineer.

The inlet sediment control device shall be as manufactured to fit the opening of the drainage structure under regular flow conditions, and shall be mounted under the grate. The insert shall be secured from the surface such that the grate can be removed without the insert discharging into the structure. The filter material shall be installed and maintained in accordance with the manufacturer's written literature and as directed by the Engineer.

Inlet sediment control devices shall remain in place until the placement of the pavement overlay or top course and the graded areas have become permanently stabilized by vegetative growth. All materials used for the filter fabric will become the property of the Contractor and shall be removed from the site.

The Contractor shall inspect the condition of inlet sediment control devices after each rainstorm and during major rain events. Inlet sediment control devices shall be cleaned periodically as directed by the manufacturer to remove and disposed of accumulated debris as required. Inlet sediment control devices, which become damaged during construction operations, shall be repaired or replaced immediately at no additional cost to the Town.

When emptying the inlet sediment control device, the Contractor shall take all due care to prevent sediment from entering the structure. Any silt or other debris found in the drainage system at the end of

construction shall be removed at the Contractor's expense. The silt and sediment from the inlet sediment control device shall be legally disposed of offsite. Under no condition shall silt and sediment from the insert be deposited on site and used in construction.

All curb openings shall be blocked to prevent stormwater from bypassing the device.

METHOD OF MEASUREMENT AND PAYMENT

Inlet sediment control devices will be measured for payment by the each, complete in place.

Inlet sediment control devices will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for removal and disposal of the sediment from the insert, but all costs in connection therewith shall be included in the Contract unit price bid.

ITEM 701.2

CEMENT CONCRETE WHEELCHAIR RAMP

SQUARE YARD

The work under this item shall conform to the relevant provisions of Section 701 of the Standard Specifications and the following:

DESCRIPTION

The depth of the cement concrete wheelchair ramp shall be 4 inches in thickness.

Detectable warning panels shall be installed as shown on the Plans and as detailed in the Construction Standard Details E 107.6.3 R and E 107.6.5R. The tile shall conform to the Americans with Disabilities Act (ADA) requirements. Detectable warning panels shall be constructed of inlayed prefabricated or cast-in-place. Surface applications such as thermoplastic shall not be accepted. **The contractor shall contact the Town to determine the panel color prior to ordering.**

METHOD OF MEASUREMENT AND PAYMENT

Cement concrete wheelchair ramp will be measured for payment by the square yard, complete in place.

Cement concrete wheelchair ramp will be paid for at the Contract unit price per square yard, which price shall include all labor, materials, equipment and incidental costs required to complete the work.

Payment for the Detectable Warning Panels shall be considered incidental to the construction of the wheelchair ramps in which they are being installed.

ITEM 716. **ITEM 716.1**

STREET ADDRESS MARKER REMOVED AND RESET **STREET ADDRESS POST REMOVED AND RESET**

EACH **EACH**

The work under this item shall conform to the relevant provisions of Section 715 of the Standard Specifications and the following:

DESCRIPTION

Existing street address markers (stones) removed and reset shall be carefully removed by the contractor and temporarily reset or stored outside of the limits of work. After slope work is completed, the stones shall be reset on a level surface at locations directed by the Engineer.

Existing street address posts (both wood and granite) removed and reset shall be carefully removed by the contractor and temporarily reset or stored on boards outside of the limits of work. The work shall include excavating the existing posts, and backfilling with compacted gravel of the holes resulting from the excavation. After slope work is completed, the street address posts shall be reset plumb at locations directed by the Engineer.

METHOD OF MEASUREMENT AND PAYMENT

Street address markers removed and reset and street address posts removed and reset will be measured for payment by each, complete in place, regardless of size of stone or type of post.

Street address markers removed and reset and street address posts removed and reset shall be paid for by each, which price shall include all labor, materials, equipment and incidental costs required to complete the work. Backfilling of existing holes with gravel shall be considered incidental to this item.

ITEM 756.

NPDES STORM WATER POLLUTION PLAN

LUMP SUM

Pursuant to the Federal Clean Water Act, effective March 10, 2003, construction activities which disturb one acre or more are required to apply to the U.S. Environmental Protection Agency (EPA) for coverage under the NPDES General Permit for Storm Water Discharges From Construction Activities. On July 1, 2003 (68 FR 39087), EPA published the final NPDES construction general permit for construction activity. On August 4, 2003 (68 FR 45817), EPA reissued the General Permit for the Commonwealth of Massachusetts and included state specific requirements.

The NPDES General Permit requires the submission of a Notice of Intent (NOI) to the U.S. EPA prior to the start of construction (defined as any activity which disturbs land, including clearing and grubbing). There is a seven (7) day review period commencing from the date on which EPA enters the Notice into their database. The Contractor is advised that, based on the review of the NOI, EPA may require additional information, including but not limited to, the submission of the Storm Water Pollution Prevention Plan for review. Work may not commence on the project until final authorization has been granted by EPA. Any additional time required by EPA for review of submittals will not constitute a basis for claim of delay.

In addition, if the project discharges to an Outstanding Resource Water, vernal pool, or is within a coastal ACEC as identified by the Massachusetts Department of Environmental Protection (DEP), a separate notification to DEP is required. DEP may also require submission of the Storm Water Pollution Prevention Plan for review and approval. Filing fees associated with the notification and, if required, the SWPPP filing to DEP shall be paid by the Contractor.

The Town and the Contractor must submit separate NOIs. The Contractor is responsible to ensure that all required parties have submitted an NOI and shall provide proof of same to the Engineer.

The General Permit also requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) in accordance with the aforementioned statutes and regulations. The Plan will include the General Permit conditions and detailed descriptions of controls of erosion and sedimentation to be implemented during construction. It is the responsibility of the Contractor to prepare the SWPPP to meet the requirements of the most recently issued CGP.

The Contractor shall submit the Plan to the Engineer for approval at least four weeks prior to any site activities. It is the responsibility of the Contractor to be familiar with the General Permit conditions and the conditions of any state Wetlands Protection Act Order, Water Quality Certification, Corps of

Engineers Section 404 Permit and other environmental permits applicable to this project and to include in the Stormwater Pollution Prevention Plan the methods and means necessary to comply with applicable conditions of said permits.

It is the responsibility of the Contractor to complete the SWPPP in accordance with the EPA Construction General Permit, provide all information required, and obtain any and all certifications as required by the Construction General Permit. Any amendments to the SWPPP required by site conditions, schedule changes, revised work, construction methodologies, and the like are the responsibility of the Contractor. Amendments will require the approval of the Engineer prior to implementation.

Included in the General Permit conditions is the requirement for inspection of all erosion controls and site conditions on a weekly basis as well as after each incidence of rainfall exceeding 0.5 inches in twenty-four hours. The Contractor shall choose a qualified individual who will be on-site during construction to perform these inspections. The Engineer must approve the Contractor's inspector. In addition, if the Engineer determines at any time that the inspector's performance is inadequate, the Contractor shall provide an alternate inspector. Written weekly inspection forms, storm event inspection forms, and Monthly Summary Reports must be completed and provided to the Engineer. Monthly Summary Reports must include a summary of construction activities undertaken during the reporting period, general site conditions, erosion control maintenance and corrective actions taken, the anticipated schedule of construction activities for the next reporting period, any SWPPP amendments, and representative photographs.

The Contractor is responsible for preparation of the Plan, all SWPPP certifications, inspections, reports and any and all corrective actions necessary to comply with the provisions of the General Permit. Work associated with performance of inspections is not included under this Item. The Standard Specifications require adequate erosion control for the duration of the Contract. Inspection of these controls is considered incidental to the applicable items. This Item addresses acceptable completion of the SWPPP, any revisions/amendments required during construction, and preparation of monthly reports. In addition, any erosion controls beyond those specified in bid items elsewhere in this Contract which are selected by the Contractor to facilitate and/or address the Contractor's schedule, methods and prosecution of the work shall be considered incidental to this item.

The CGP requires the submission of a Notice of Termination (NOT) from all operators when final stabilization has been achieved. Approval of final stabilization by the Engineer and confirmation of submission of the NOT will be required prior to submission of the Resident Engineer's Final Estimate.

METHOD OF MEASUREMENT AND PAYMENT

Payment for all work detailed above, including Plan preparation, required revisions, revisions/addenda during construction, monthly reports and filing fees are included in the Lump Sum for this Item. Upon final acceptance of the SWPPP by the Town, a payment equal to 50% of the Contract Lump Sum price shall be paid. The remaining 50% of the Lump Sum shall be paid in 10% increments distributed equally throughout the remaining period of the Contract.

ITEM 767.12**COMPOST FILTER TUBE****FOOT**

The purpose of this item is to provide a linear, compost-filled tube for filtering suspended sediments from storm water flow. This item shall conform to the requirements of Section 751 and 767 of the Standard Specifications and the following:

MATERIALS

Material for the filter tubes shall be compost meeting M1.06.0, except that no manure or bio-solids shall be used. In addition, no kiln-dried wood or construction debris shall be allowed. Compost shall pass through a 3 inch sieve.

Tubes for compost filters shall be 12 inches (minimum) in diameter with an effective height of 9.5 inches. The tubes shall be jute mesh or approved biodegradable material.

Stakes for anchors, if required, shall be nominal 2x2 stakes.

SUBMITTALS

A catalog cut of the proposed compost filter tube shall be submitted to the Engineer for approval prior to installation.

METHODS

Tubes of compost may be filled on site or shipped. Tubes shall be placed, filled and staked in place as required to ensure stability against water flows. All tubes shall be tamped to ensure good contact with soil.

The Contractor shall ensure that the filter tubes function as intended at all times. Tubes shall be inspected after each rainfall and at least daily during prolonged rainfall. The Contractor shall immediately correct all deficiencies, including, but not limited, to washout, overtopping, clogging due to sediment and erosion, and review location of tubes in areas where construction activity causes drainage runoff to ensure that the tubes are properly located for effectiveness. Where deficiencies exist, such as overtopping or wash-out, additional staking or compost material shall be installed as directed by the Engineer. Sediment deposits shall be removed as necessary to maintain the filters in working condition.

Filter tube fabric and stakes shall be removed when site conditions are sufficiently stable to prevent surface erosion, and after receiving permission to do so from the Engineer. All tube fabric shall be cut and removed and disposed of off-site by the Contractor. At the direction of the Engineer, the Contractor may rake out and seed compost so that it is no greater than 2 inches in depth on soil substrate.

METHOD OF MEASUREMENT AND PAYMENT

Compost filter tube will be measured for payment by the foot of compost filter tube installed, approved, and maintained in place.

Compost filter tube will be paid for at the Contract unit price per foot and shall be compensation for all labor equipment and materials necessary to complete the work specified above, including, but not limited to, stakes and tube fabric, compost mulch wedge along top of tubes, removal and disposal of fabric and stakes, raking and seeding of compost.

ITEM 830.**TRAFFIC SIGNING****LUMP SUM**

Description, Materials and Construction Methods shall all be in accordance with the relevant provisions of Sections 828 and 840 and the following:

It is the intention of the Town of Nantucket to install all permanent regulatory, warning and street signing as shown on the plans with materials to be supplied by the Contractor. The Contractor shall be responsible for furnishing and delivering of the following materials to the Nantucket Department of Public Works:

- All warning, regulatory, directional and other signs (exclusive of Street Name Signs (D3-X) as shown on the Pavement Marking and Signing Plans and Traffic Sign Summary Plan, complete and ready to be installed.
- A sufficient quantity of 4" x 4" pressure-treated wood posts (unpainted) to install all signs, inclusive of Street Name Signs. Wood posts shall be cut from well-seasoned, straight, sound, southern yellow pine, Grade No. 2 or better, dressed on all four sides and shall be treated with chromated copper arsenate Type C in accordance with AASHTO M133-86. The posts shall be of sufficient length to provide for 4-foot embedment and sign clearance as shown on the detail on the Traffic Sign Summary plan.
- A sufficient length of 1" x 12" pressure-treated fir board to allow the Town to fabricate street signs as shown on the Traffic Sign Summary plan.
- Four (4) gallons of Benjamin Moore "Charcoal Slate Gray" paint.
- Four (4) gallons of Benjamin Moore "English Ivory" paint.

METHOD OF PAYMENT

Traffic Signing shall be paid for at the contract lump sum bid price, complete and delivered to the Nantucket Department of Public Works.

ITEM 874.2**TRAFFIC SIGN REMOVED AND RESET****EACH**

The work under this Item shall conform to the relevant provisions of Section 828 of the Standard Specifications and the following:

CONSTRUCTION

The Contractor shall carefully remove all existing signs to be reset off of existing support posts. Existing foundations shall be removed to a depth of at least 6 inches below the existing ground and the holes backfilled with gravel. The surface shall be patched with a material to match the existing ground or as directed by the Engineer.

Signs and attachment hardware shall be satisfactorily stored and protected until reset in the proposed work. Sign support posts shall be disposed of in a satisfactory manner. New sign support posts shall be provided as called for under Item 830.

Signs damaged or otherwise made unsuitable for reuse while being removed, transported, stored or reset shall be replaced with new material at no additional cost. New attachment hardware shall be furnished and installed as necessary to replace any missing or unusable existing hardware.

All new wood posts to be installed for reset signs shall be painted on all sides with two (2) coats of Benjamin Moore "Charcoal Slate Gray" paint.

METHOD OF MEASUREMENT AND PAYMENT

Traffic sign removed and reset will be measured for payment by the each, complete in place.

Traffic sign removed and reset will be paid for at the Contract unit price per each, which price shall include all labor, materials, equipment and incidental costs required to complete the work. No separate payment will be made for dismantling, storing and resetting of the signs as designated above, the excavation and disposal of the existing foundation, the supplying and placing of compacted gravel backfill where foundations and posts are removed and the patching of the existing surface, but all costs in connection therewith shall be included in the Contract unit price bid.

New wood posts and attachment screws shall be considered incidental to this item.

ITEM 874.41

TRAFFIC SIGN REMOVED AND DISCARDED

EACH

The work under this item shall conform to the relevant provisions of Section 828 of the Standard Specifications and the following:

CONSTRUCTION

Work under this item shall include the dismantling, removal, and disposal of the existing roadside traffic signs and street signs as shown on the plans to be removed and discarded, including the removal and disposal of the sign supports and their foundations.

The work shall include removing the supports, excavating the existing foundation, the disposal of the concrete and supports, the backfilling with compacted gravel of the holes resulting from the excavation and removal of the supports and the replacement, in kind, of any surface material disturbed.

The existing signs shall not be removed until the new signs and structures replacing them are ready for installation or until the Engineer orders their removal.

METHOD OF MEASUREMENT AND PAYMENT

Traffic sign removed and stacked will be measured for payment by the each, complete in place.

Traffic sign removed and stacked will be paid for at the Contract unit price per each, which price shall be full compensation for dismantling, removal and stacking of the signs, and removal and disposal of the posts, the supplying and placing of compacted gravel backfill where posts are removed, restoration of surface, and all other incidentals necessary for the proper completion of this Item.

END SPECIAL PROVISIONS

APPENDIX A
MASSDOT INTERIM SUPPLEMENTAL SPECIFICATIONS